

LAND APPLICATION SITE

JOHN R. HAILE

EXJRH 1 – 17

ESSEX COUNTY

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 1-15-16 between JOHN R. HAILE referred to here as "Landowner", and Recyc Systems, Inc., referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in ESSEX CTY, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>42-35B</u>	<u>42-42</u>		
<u>42-43</u>	<u>41-22</u>		
<u>42-35</u>	<u>42-47B</u>		
<u>42-33</u>	<u>42-45</u>		
<u>42-31</u>	<u>42-46</u>		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

☐ The Landowner is the sole owner of the properties identified herein.

☒ The Landowner is ~~one of multiple~~ owners of the properties identified herein. WIFE

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids

Water treatment residuals

Food processing waste

Other industrial sludges

☒ Yes ☐ No

☒ Yes ☐ No

☒ Yes ☐ No

☒ Yes ☐ No

JOHN R. HAILE

Signature

Mailing Address & Phone Number

Landowner - Printed Name, Title

804-443-2418

460 LATANES Mill Rd
TAPPAHANNOCK VA 22560

Permittee:

Recyc Systems, Inc., the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Permittee - Authorized Representative
Printed Name

Signature

PO Box 562 Remington, Virginia 22734

Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc
 Landowner: JOHN R. HAILE

County or City: ESSEX

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

John R Haile
 Landowner's Signature

1-15-16
 Date

John R Haile
 Farm Operator Signature

460 LATANES Mill Rd.

Mailing Address & Phone Number

TAPPANANNOCK VA 22560
804 443-2418

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 2-1-16 between Patricia R. Haile referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Essex Co, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.
☒ The Landowner is ~~one of multiple~~ owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Patricia R. Haile Patricia R. Haile 460 Latanes Mill Rd Tappahannock VA
Landowner - Printed Name, Title Signature Mailing Address & Phone Number 22560

Tel# 804-443-2418

Permittee:

Recyc Systems, Inc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Strain
Permittee - Authorized Representative
Printed Name

Strain
Signature

Recyc Systems Inc.
PO Box 562 Remington, Virginia 22734
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc County or City: Essex Co.
 Landowner: Patricia R Haile

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil;
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Patricia R Haile

Landowner's Signature

1-29-2016

Date

Patricia R Haile

Farm Operator Signature

460 Latanes Mill Rd Tappahannock VA 22560

Mailing Address & Phone Number

804-443-2418

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 1-27-2016 between GEORGE TOWNS referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Essex Co., Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>42-44</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>George T. Towns Jr.</u>	<u>George T. Towns Jr.</u>	<u>P.O. Box 2064 - Tapp, Va</u>
Landowner - Printed Name, Title	Signature	Mailing Address & Phone Number <u>22560</u>

Permittee:

Recyc Systems, Inc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Shub
Permittee - Authorized Representative
Printed Name

Shub
Signature

PO Box 562 Remington, Virginia 22734
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc County or City: ESSEX
 Landowner: GEORGE T. TOWNS, Sr

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

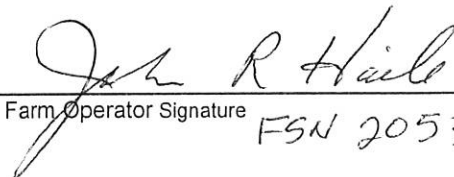
1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
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 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
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 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
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Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
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 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


 Landowner's Signature

1-27-2016
 Date


 Farm Operator Signature

FSN 2053 TRACT 749
 Mailing Address & Phone Number

John Haile Essex Co.

To: Recycle Systems, Inc.

I give permission to apply municipal sludge on John R. Haile's property adjacent to my property line with no restrictions.


My property is on: 919 LATANES MILL RD TAPPAHANNOCK
VA 22560

Signature: [Signature]

Date: 6-7-2017

FARM DATA SHEET

SITE NAME:	John R. Haile	COUNTY:	Essex
OWNER:	See List Below	OPERATOR:	John R. Haile
OWNER'S	See List Below	OPERATOR'S	460 Latanes Mill Road
ADDRESS:		ADDRESS:	Tappahannock, VA 22560
OWNER'S TELEPHONE:	See List Below	OPERATOR'S TELEPHONE:	804-443-2418
GENERAL FARM TYPE:	Pasture/ Hay	CELL PHONE:	804-514-4820
# CATTLE:	150	EMAIL:	-
LAGOON or SLURRY:	None	LATITUDE:	Field 1-13, 16, 17 37.847 Field 14-15 37.847
TOPO QUAD:	Millers Tavern and Aylett	LONGITUDE:	Field 1-13, 16, 17 76.976 Field 14-15 77.017
COMMENTS:		METHOD OF DETERMINATION:	Online Maps
Fields 1-15, 17 John R. and Patricia R. Haile Trustee 460 Lantanes Mill Road Tappahannock, VA 22560 804-443-2418		Field 16 George T. Towns, Jr. P.O. Box 2064 Tappahannock, VA 22560	

SD 
9-6-18

JOHN R. HAILE
ESSEX COUNTY
NEW FIELD CHANGES

**OLD FIELD 12 IS NOW DIVIDED UP INTO NEW
FIELD 12 AND NEW FIELD 17.**

RECYC SYSTEMS, INC

FIELD DATA SHEET

Field Identification	Gross Acres	DEQ Control ID	Environmentally Sensitive Soils				Hydro Map	Tax Map #	FSA Tract #
			Water Table	Bed Rock/Shallow	Surf/Leach	Freq Flood			
EXJRH 1	17.5	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 2, 5
EXJRH 2	23.0	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-43	T 385 F 1
EXJRH 3	35.2	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 6
EXJRH 4	8.2	51057-00319-0000	-	-	-	-	RA 61	42-42	T 744 F 9
EXJRH 5	26.4	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 8
EXJRH 6	22.0	51057-00319-0000	3A Dec.-Apr. 20D Nov.-Apr.	-	-	3A Jan.-May	RA 61	42-42	T 744 F 7
EXJRH 7	33.4	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 4
EXJRH 8	15.8	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 3, 10
EXJRH 9	12.4	51057-00319-0000	20D Nov.-Apr.	-	-	-	RA 61	42-42	T 744 F 1
EXJRH 10	24.0	51057-00319-0000	-	-	-	-	RA 61	42-42	T 744 F 1
EXJRH 11	8.1	51057-00319-0000	-	-	-	-	RA 61	42-33	T 425 F 1
EXJRH 12	8.6	51057-00319-0000	-	-	-	-	RA 61	42-31	T 401 F 2
EXJRH 13	33.2	51057-00319-0000	-	-	-	-	RA 61	42-35 42-35B	T 767 F 1

9-6-18

EXJRH 14	24.6	51057-00320-0000	21C Nov.-Apr.	-	-	-	RA 61	41-22	T 797 F 2
EXJRH 15	23.2	51057-00321-0000	20D Nov.-Apr.	-	-	-	RA 61	41-22	T 797 F 1
EXJRH 16	12.6	51057-00321-0000	-	-	-	-	RA 61	42-44	T 749 F 1
EXJRH 17	8.4	51057-00319-0000	-	-	-	-	RA 61	42-31	T 401 F 1
TOTAL ACRES IN SITE	336.6								

9-6-18

Landowner Coordination Form

Signature not required on this page

[illegible]

Report Number: 17-153-0548

Account Number: 70594



7621 Whitepine Road, Richmond, VA 23237

Main 804-743-9401 ° Fax 804-271-6446

www.waypointanalytical.com

Send To: Recyc Systems Inc
Susan Trumbo
8455 Whiteshop Road
Culpepper VA 22701

"Every acre...Every year."™

Grower: John Haile
Essex Co

SOIL ANALYSIS REPORT

Analytical Method(s): SMP Buffer pH Mehlich 3 Loss On Ignition Water pH

Date Received: 06/02/2017

Date Of Analysis: 06/05/2017

Date Of Report: 06/05/2017

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus				Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g	
1	02875	2.8 M		99	172 VH			28 VL	49 L	828 H		6.3	6.88	0.5	5.1	
6	02876	3.3 M		109	255 VH			34 VL	58 L	751 H		6.0	6.85	0.8	5.1	
7A	02877	3.1 M		104	279 VH			45 VL	48 L	883 H		6.2	6.86	0.7	5.6	
16	02878	1.7 L		80	52 H			29 VL	61 H	387 H		6.6		0.2	2.7	

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
1	1.4	8.0	81.2		9.8			6.9 H	9 L						
6	1.7	9.5	73.6		15.7			11.0 VH	10 M						
7A	2.1	7.1	78.8		12.5			10.7 VH	12 M						
16	2.8	18.8	71.7		7.4			2.2 L	12 M						

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGeary*

Paucic McGeary

Virginia Cooperative Extension

Soil Test Report

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 1000 Ross St.
 Box 849
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Virginia Tech Soil Testing Laboratory
 145 Smyth Hall (0465)
 185 Ag Quad Ln
 Blacksburg, VA 24061
 www.soiltest.vt.edu

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 460 LATANES MILL RD

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TAPPAHANNOCK, VA 22560

SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
RET15	2258 745 #5	Orchardgrass/Fescue-Clover Pasture (40) CHF 2		18+		23B 100				III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts (ppm)
Result	276	121	1333	151	10.8	5.2	2.4	99.9	0.2	
Rating	VH	M	M+	H-	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.25	5.0	17.8	82.2	66.6	12.5	3.1	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC		Fertilizer, lb/A	
Amount	Type	N	P2O5
1	AG	See Comment	0
			K2O
			40

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

131. If additional production is needed later on, apply 40 to 60 lbs/A of N during the grazing season. If you are planning to overseed a legume into the stand, omit the N recommendation.

122. P2O5 and K2O recommendations are for annual application. However, rates can be doubled and applied every other year if desired.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
ELTIM	3			18+		23B 70	20D 30			III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	283	190	2692	165	10.9	8.6	2.2	71.2	0.4	
Rating	VH	H-	VH	H-	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.8	6.45	7.7	0.7	99.4	87.4	8.8	3.2	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
0	

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	0

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
ELVDN	2258 744 #8 NORTH	TRH 4 TRH 5A		18+		19E 70	23B 30			III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	196	143	1514	145	8.6	4.2	1.4	60.0	0.3	
Rating	VH	M	H-	H-	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.25	5.5	16.3	83.7	69.3	11.0	3.4	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1	AG

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	40

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
ELVDS	2258 744 #8 SOUTH	JRH TB JBH SB		18+		20D 60	19E 40			II

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts (ppm)
Result	247	211	1815	154	11.2	4.4	1.7	69.3	0.3	
Rating	VH	H	H	H-	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.24	6.4	14.9	85.1	71.0	9.9	4.2	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1	AG

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	0

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

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122. P2O5 and K2O recommendations are for annual application. However, rates can be doubled and applied every other year if desired.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
ELCF	2258 744 #4 minus	IRH7A		18+		23B 80	10C 20			III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts (ppm)
Result	356	214	2136	131	13.0	5.8	2.6	94.9	0.4	
Rating	VH	H	H+	M+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.23	7.2	14.1	85.9	74.5	7.5	3.8	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1.25	AG

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	0

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
ELLP	2258 744 #7	JRH 6		18+		10C 60	19E 30	20D 10		III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	318	143	2143	228	15.2	4.4	2.1	80.1	0.3	
Rating	VH	M	H+	VH	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.1	6.27	7.2	10.7	89.3	73.9	13.0	2.5	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1	AG

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	40

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131. If additional production is needed later on, apply 40 to 60 lbs/A of N during the grazing season. If you are planning to overseed a legume into the stand, omit the N recommendation.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
EL13	2258 744 #3	JR48		18+		23B 100				

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	155	81	1015	68	9.3	3.6	2.7	82.5	0.2	
Rating	VH	M-	M	L+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	5.3	6.11	4.6	37.1	62.9	54.6	6.0	2.2	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Sorghum-Sudan, Millet, Sudan (35)

Lime, TONS/AC		Fertilizer, lb/A		
Amount	Type	N	P205	K20
2	AG	70	0	90

129. Apply the recommended N before seeding. After each cutting, apply 40 to 60 lbs of N per acre for maximum production.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
EL35E	2258 744 #1 - EAST	TRA9		18+		23B 100				

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	190	92	970	65	9.8	3.7	2.3	92.0	0.2	
Rating	VH	M-	M	L+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	5.3	6.08	4.7	40.4	59.6	51.5	5.7	2.5	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Sorghum-Sudan, Millet, Sudan (35)

Lime, TONS/AC		Fertilizer, lb/A		
Amount	Type	N	P205	K20
2	AG	70	0	90

129. Apply the recommended N before seeding. After each cutting, apply 40 to 60 lbs of N per acre for maximum production.

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
EL35W	2258 744 #1 WEST	TRH 10		18+		23B 100				

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts (ppm)
Result	264	172	1838	126	10.4	6.7	2.5	97.9	0.3	
Rating	VH	M+	H	M+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.23	6.3	15.9	84.1	72.4	8.2	3.5	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Sorghum-Sudan, Millet, Sudan (35)

Lime, TONS/AC		Fertilizer, lb/A		
Amount	Type	N	P205	K20
1.25	AG	70	0	70

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SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
RET20	2258 745 #1 p/s	TRH 11 CAF 1		18+		23B 100				III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts (ppm)
Result	248	165	1492	159	9.8	5.5	2.5	113.9	0.3	
Rating	VH	M+	H-	H-	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.0	6.23	5.6	18.0	82.0	66.5	11.7	3.8	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1.25	AG

Fertilizer, lb/A		
N	P2O5	K2O
See	0	30
Comment		

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Account Number: 70594



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Essex Co

Send To: Recyc Systems Inc
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SOIL ANALYSIS REPORT

Analytical Method(s): SMP Buffer pH Mehlich 3 Loss On Ignition Water pH

Date Received: 06/09/2017

Date Of Analysis: 06/12/2017

Date Of Report: 06/12/2017

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
13A	04000	3.3 M		106	325 VH			69 L	96 M	1105 H		6.6		0.4	6.9
13B	04001	3.0 M		101	309 VH			55 VL	82 M	963 H		6.4	6.87	0.6	6.2

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
13A	2.6	11.6	80.1		5.8			11.7 VH	15 M						
13B	2.3	11.0	77.7		9.7			10.4 VH	11 M						

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGeary*

Paucic McGroary

2016-03-17

Virginia Cooperative Extension

Soil Test Report

Contact:
County Office
Box 849
Tappahannock, VA 22560
443-3551

Virginia Tech Soil Testing Laboratory
145 Smyth Hall (0465)
185 Ag Quad Ln
Blacksburg, VA 24061
www.soiltest.vt.edu

SEE NOTES:

1 3

at www.soiltest.vt.edu under R

HAILE JOHN R.
460 LATANES MILL RD

TAPPAHANNOCK, VA 22560

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Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Pro C
WILN	2258 797 #2	TRH 14		18+		10B 80	21C 20			

LAB TEST RESULTS (see Note 1)										
Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	S.Salts
Result	184	76	1421	133	7.9	12.0	3.4	91.8	0.2	
Rating	VH	M-	M+	M+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	5.8	6.24	5.1	18.5	81.5	69.0	10.7	1.9	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
1	AG

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	50

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

131. If additional production is needed later on, apply 40 to 60 lbs/A of N during the grazing season. If you are planning to overseed a legume into the stand, omit the N recommendation.

122. P2O5 and K2O recommendations are for annual application. However, rates can be doubled and applied every other year if desired.

990. We are trying to improve our service. PLEASE take a moment to complete our brief, anonymous customer survey at tinyurl.com/soiltestsurvey.

991. "Explanation of Soil Tests, Note 1" and other referenced notes are viewable at www.soiltest.vt.edu under Report Notes.

Virginia Cooperative Extension

Soil Test Report

Contact:
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849
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43-3551

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SEE NOTES:

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at www.soiltest.vt.edu under Report Notes

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HAILE JOHN R.
460 LATANES MILL RD

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TAPPAHANNOCK, VA 22560

SAMPLE HISTORY

Sample ID	Field ID	LAST CROP		LAST LIME APPLICATION		SOIL INFORMATION				
		Name	Yield	Months Prev.	Tons/Acre	SMU-1 %	SMU-2 %	SMU-3 %	Yield Estimate	Productivity Group
WILS	0258 797 #1	IRH 15		18+		10B 70	20D 20	9B 10		III

LAB TEST RESULTS (see Note 1)

Analysis	P (lb/A)	K (lb/A)	Ca (lb/A)	Mg (lb/A)	Zn (ppm)	Mn (ppm)	Cu (ppm)	Fe (ppm)	B (ppm)	Salts (ppm)
Result	218	69	1640	123	11.3	5.4	3.0	116.1	0.2	
Rating	VH	L+	H-	M+	SUFF	SUFF	SUFF	SUFF	SUFF	

Analysis	Soil pH	Buffer Index	Est.-CEC (meq/100g)	Acidity (%)	Base Sat. (%)	Ca Sat. (%)	Mg Sat. (%)	K Sat. (%)	Organic Matter (%)
Result	6.4	6.30	5.3	11.3	88.8	77.5	9.6	1.7	

FERTILIZER AND LIMESTONE RECOMMENDATIONS

Crop: Orchardgrass/Fescue-Clover Pasture (40)

Lime, TONS/AC	
Amount	Type
0	

Fertilizer, lb/A		
N	P2O5	K2O
See Comment	0	60

825. If stand contains less than 25 percent clover, apply 40-60 lbs N/A.

131. If additional production is needed later on, apply 40 to 60 lbs/A of N during the grazing season. If you are planning to overseed a legume into the stand, omit the N recommendation.

122. P2O5 and K2O recommendations are for annual application. However, rates can be doubled and applied every other year if desired.

990. We are trying to improve our service. PLEASE take a moment to complete our brief, anonymous customer survey at tinyurl.com/soiltestsurvey.

991. "Explanation of Soil Tests, Note 1" and other referenced notes are viewable at www.soiltest.vt.edu under Report Notes.

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Fall, 2018-Winter, 2020)
John R. Haile
Planner: John Doe

Tract: 385

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1/EXJRH 2(0P)	23/23	2018	Grass Pasture	50-0-40	0/0				50-0-40	25			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 401

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
2/EXJRH 12(N)	9/9	2018	Fescue grass hay mt.	70-50-95	0/0				70-50-95	N/A			
1/EXJRH 17(N)	8/8	2018	Fescue grass hay mt.	70-50-95	0/0				70-50-95	N/A			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 425

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1/EXJRH 11(1P)	8/8	2018	Hay/Pasture	100-0-85	0/0				100-0-85	35			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 744

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - applied N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
2, 5/EXJRH 1(1P)	18/18	2018	Grass Pasture	50-0-70	0/0				50-0-70	25			
6/EXJRH 3(0P)	35/35	2018	Grass Pasture	50-0-0	0/0				50-0-0	25			
9/EXJRH 4(1P)	8/8	2018	Grass Pasture	50-0-40	0/0				50-0-40	25			
8/EXJRH 5(1P)	26/26	2018	Grass Pasture	50-0-40	0/0				50-0-40	25			
7/EXJRH 6(0P)	22/22	2018	Grass Pasture	50-0-70	0/0				50-0-70	25			
4/EXJRH 7(0P)	33/33	2018	Grass Pasture	50-0-60	0/0				50-0-60	25			
3, 10/EXJRH 8(1P)	16/16	2018	Hay/Pasture	100-0-95	0/0				100-0-95	36			
1/EXJRH 9(1P)	12/12	2018	Fescue grass hay mt.	70-0-110	0/0				70-0-110	41			
1/EXJRH 10(1P)	24/24	2018	Fescue grass hay mt.	70-0-85	0/0				70-0-85	40			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 749 Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - applied N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1/EXJRH 16(N)	13/13	2018	Fescue grass hay mt.	90-60-220	0/0				90-60-220	N/A			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 767

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1/EXJRH 13(0P)	33/33	2018	Hay/Pasture	100-0-110	0/0				100-0-110	37			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Tract: 797

Location: Essex

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
2/EXJRH 14(1P)	25/25	2018	Grass Pasture	50-0-100	0/0				50-0-100	30			
1/EXJRH 15(1P)	23/23	2018	Grass Pasture	50-0-60	0/0				50-0-60	25			

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
385	EXJRH 2	23	2016-Wi	VH (276 P lbs/acre)	M (121 K lbs/acre)	Virginia Tech	6.		
401	EXJRH 12	9	[No Test]						
401	EXJRH 17	8	[No Test]						
425	EXJRH 11	8	2016-Wi	VH (248 P lbs/acre)	M+ (165 K lbs/acre)	Virginia Tech	6.		
744	EXJRH 1	18	2017-Sp	VH (172 P ppm)	L (28 K ppm)	A&L MIII	6.3		
744	EXJRH 3	35	2016-Wi	VH (283 P lbs/acre)	H- (190 K lbs/acre)	Virginia Tech	6.8		
744	EXJRH 4	8	2016-Wi	VH (196 P lbs/acre)	M (143 K lbs/acre)	Virginia Tech	6.		
744	EXJRH 5	26	2016-Wi	VH (196 P lbs/acre)	M (143 K lbs/acre)	Virginia Tech	6.		
744	EXJRH 6	22	2017-Sp	VH (255 P ppm)	L (34 K ppm)	A&L MIII	6.		
744	EXJRH 7	33	2017-Sp	VH (279 P ppm)	L+ (45 K ppm)	A&L MIII	6.2		
744	EXJRH 8	16	2016-Wi	VH (155 P ppm)	M (81 K ppm)	A&L MIII	5.3		
744	EXJRH 9	12	2016-Wi	VH (190 P lbs/acre)	M- (92 K lbs/acre)	Virginia Tech	5.3		
744	EXJRH 10	24	2016-Wi	VH (264 P lbs/acre)	M+ (172 K lbs/acre)	Virginia Tech	6.		
749	EXJRH 16	13	2017-Sp	H- (52 P ppm)	L (29 K ppm)	A&L MIII	6.6		
767	EXJRH 13	33	2017-Su	VH (325 P ppm)	M- (69 K ppm)	A&L MIII	6.6		
797	EXJRH 14	25	2016-Wi	VH (184 P lbs/acre)	L+ (76 K lbs/acre)	Virginia Tech	5.8		
797	EXJRH 15	23	2016-Wi	VH (218 P lbs/acre)	L+ (69 K lbs/acre)	Virginia Tech	6.4		

Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
385	385/1	EXJRH 2	23	Suffolk	IVa	II	Not Suited	III	
401	401/2	EXJRH 12	9	Suffolk	IIIb	II	Not Suited	III	
	401/1	EXJRH 17	8	Suffolk	IIIb	II	Not Suited	III	
425	425/1	EXJRH 11	8	Suffolk	IIIb	II	Not Suited	III	
744	744/2, 5	EXJRH 1*	18	Suffolk	IVa	III	Not Suited	III	High Leaching, High Slope
	744/6	EXJRH 3*	35	Suffolk	IVa	II	Not Suited	III	High Leaching, High Slope
	744/9	EXJRH 4*	8	Rumford	IVa	II	Not Suited	III	High Leaching, High Slope
	744/8	EXJRH 5*	26	Rumford	IVa	II	Not Suited	III	High Leaching, Poor Drain
	744/7	EXJRH 6*	22	Rumford	IVa	II	Not Suited	III	High Leaching, Poor Drain
	744/4	EXJRH 7*	33	Suffolk	IVa	II	Not Suited	III	High Leaching, High Slope
	744/3, 10	EXJRH 8*	16	Suffolk	IVa	II	Not Suited	III	High Leaching, High Slope
	744/1	EXJRH 9	12	Suffolk	IIIb	II	Not Suited	III	
	744/1	EXJRH 10	24	Suffolk	IIIb	II	Not Suited	III	
749	749/1	EXJRH 16	13	Emporia	IIIb	II	III	II	
767	767/1	EXJRH 13	33	Suffolk	IIIb	II	Not Suited	III	
797	797/2	EXJRH 14	25	Kempsville	IIIa	II	Not Suited	II	
	797/1	EXJRH 15*	23	Kempsville	IIIb	II	Not Suited	III	High Leaching, High Slope

* Do not apply manure or biosolids more than 30 days prior to planting. Apply commercial fertilizer nitrogen to row crops in split spring applications.

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

Farm Summary Report

Plan: **New Plan** **Fall, 2018 - Winter, 2020**

Farm Name: **John R. Haile**

Location: Essex

Specialist: John Doe

N-based Acres: 29.6

P-based Acres: 307.0

Tract Name: **385**

FSA Number: 385

Location: Essex

Field Name: **EXJRH 2**

Total Acres: 23.00 Usable Acres: 23.00

FSA Number: 1

Tract: 385

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

Zero-P

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.0	VH(276 P lbs/acre)	M(121 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
---------	--------	-------------

79	23B	Suffolk
19	20D	Rumford Slagle
2	9B	Emporia

Field Warnings:

Tract Name: 401
FSA Number: 401
Location: Essex

Field Name: EXJRH 12
Total Acres: 8.60 **Usable Acres:** 8.60
FSA Number: 2
Tract: 401
Location: Essex
Slope Class: B **Hydrologic Group:** B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
55	23B	Suffolk
45	9B	Emporia

Field Warnings:

Field Name: EXJRH 17

Total Acres: 8.40 Usable Acres: 8.40

FSA Number: 1

Tract: 401

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
24	9B	Emporia
76	23B	Suffolk

Field Warnings:**Tract Name: 425**

FSA Number: 425

Location: Essex

Field Name: EXJRH 11

Total Acres: 8.10 Usable Acres: 8.10

FSA Number: 1

Tract: 425

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.0	VH(248 P lbs/acre)	M+(165 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	23B	Suffolk

Field Warnings:

Tract Name: 467

FSA Number: 467

Location: Essex

Tract Name: 744

FSA Number: 744

Location: Essex

Field Name: EXJRH 1

Total Acres: 17.50 Usable Acres: 17.50

FSA Number: 2, 5

Tract: 744

Location: Essex

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Sp-2017	6.3	VH(172 P ppm)	L(28 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
48	20D	Rumford Slagle
52	23B	Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 3

Total Acres: 35.20 Usable Acres: 35.20

FSA Number: 6

Tract: 744

Location: Essex

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

Zero-P

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.8	VH(283 P lbs/acre)	H-(190 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
22	19E	Emporia Rumford
20	20D	Rumford Slagle
59	23B	Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 4

Total Acres: 8.20 Usable Acres: 8.20

FSA Number: 9

Tract: 744

Location: Essex

Slope Class: E Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.0	VH(196 P lbs/acre)	M(143 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	19E	Emporia Rumford

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 5

Total Acres: 26.40 Usable Acres: 26.40

FSA Number: 8

Tract: 744

Location: Essex

Slope Class: D Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.0	VH(196 P lbs/acre)	M(143 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
4	3A	Bibb
47	19E	Emporia Rumford
26	20D	Rumford Slagle
24	23B	Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with high potential for subsurface lateral flow based on soil texture and poor drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 6

Total Acres: 22.00 Usable Acres: 22.00

FSA Number: 7

Tract: 744

Location: Essex

Slope Class: D Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

Zero-P

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Sp-2017	6.0	VH(255 P ppm)	L(34 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
5	3A	Bibb
34	10C	Kempsville
44	19E	Emporia Rumford
18	20D	Rumford Slagle

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with high potential for subsurface lateral flow based on soil texture and poor drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 7

Total Acres: 33.40 Usable Acres: 33.40

FSA Number: 4

Tract: 744

Location: Essex

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

Zero-P

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Sp-2017	6.2	VH(279 P ppm)	L+(45 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
29	10C	Kempsville
2	19E	Emporia Rumford
24	20D	Rumford Slagle
45	23B	Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 8

Total Acres: 15.80 Usable Acres: 15.80

FSA Number: 3, 10

Tract: 744

Location: Essex

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Wi-2016	5.3	VH(155 P ppm)	M(81 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
23	20D	Rumford Slagle
77	23B	Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Field Name: EXJRH 9

Total Acres: 12.40 Usable Acres: 12.40

FSA Number: 1

Tract: 744

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	5.3	VH(190 P lbs/acre)	M-(92 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
90	23B	Suffolk
10	20D	Rumford Slagle

Field Warnings:

Field Name: EXJRH 10

Total Acres: 24.00 Usable Acres: 24.00

FSA Number: 1

Tract: 744

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.0	VH(264 P lbs/acre)	M+(172 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	23B	Suffolk

Field Warnings:

Tract Name: 749

FSA Number: 749

Location: Essex

Field Name: EXJRH 16

Total Acres: 12.60 Usable Acres: 12.60

FSA Number: 1

Tract: 749

Location: Essex
Slope Class: B Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Sp-2017	6.6	H-(52 P ppm)	L(29 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
3	20D	Rumford Slagle
40	23B	Suffolk
57	9B	Emporia

Field Warnings:

Tract Name: 767
FSA Number: 767
Location: Essex

Field Name: EXJRH 13

Total Acres: 33.20 Usable Acres: 33.20
FSA Number: 1
Tract: 767
Location: Essex
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

Zero-P

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K		Lab
Su-2017	6.6	VH(325 P ppm)	M-(69 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
44	9B	Emporia
1	19E	Emporia Rumford
1	20D	Rumford Slagle
54	23B	Suffolk

Field Warnings:

Tract Name: 797

FSA Number: 797

Location: Essex

Field Name: EXJRH 14

Total Acres: 24.60 Usable Acres: 24.60

FSA Number: 2

Tract: 797

Location: Essex

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	5.8	VH(184 P lbs/acre)	L+(76 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
61	10B	Kempsville
39	21C	Slagle

Field Warnings:

Field Name: EXJRH 15

Total Acres: 23.20 Usable Acres: 23.20

FSA Number: 1

Tract: 797

Location: Essex

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

P-based(1.0)

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
Wi-2016	6.4	VH(218 P lbs/acre)	L+(69 K lbs/acre)	Virginia Tech

Soils:

PERCENT	SYMBOL	SOIL SERIES
19	9B	Emporia
4	9C	Emporia
55	10B	Kempsville
22	20D	Rumford Slagle

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

MAPS

(Biosolids Land Application)



EXJRH 1-17

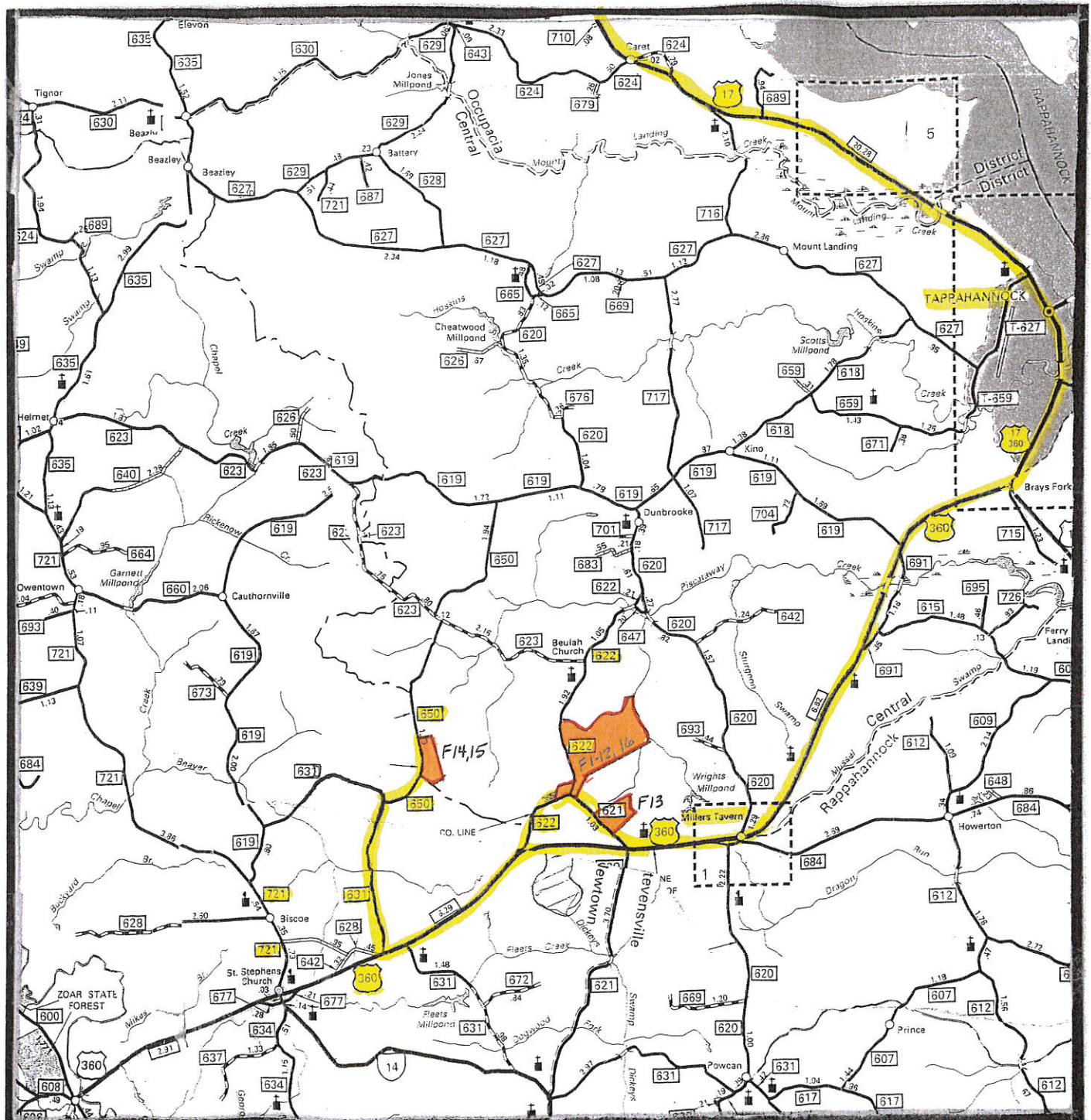
9-6-18

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



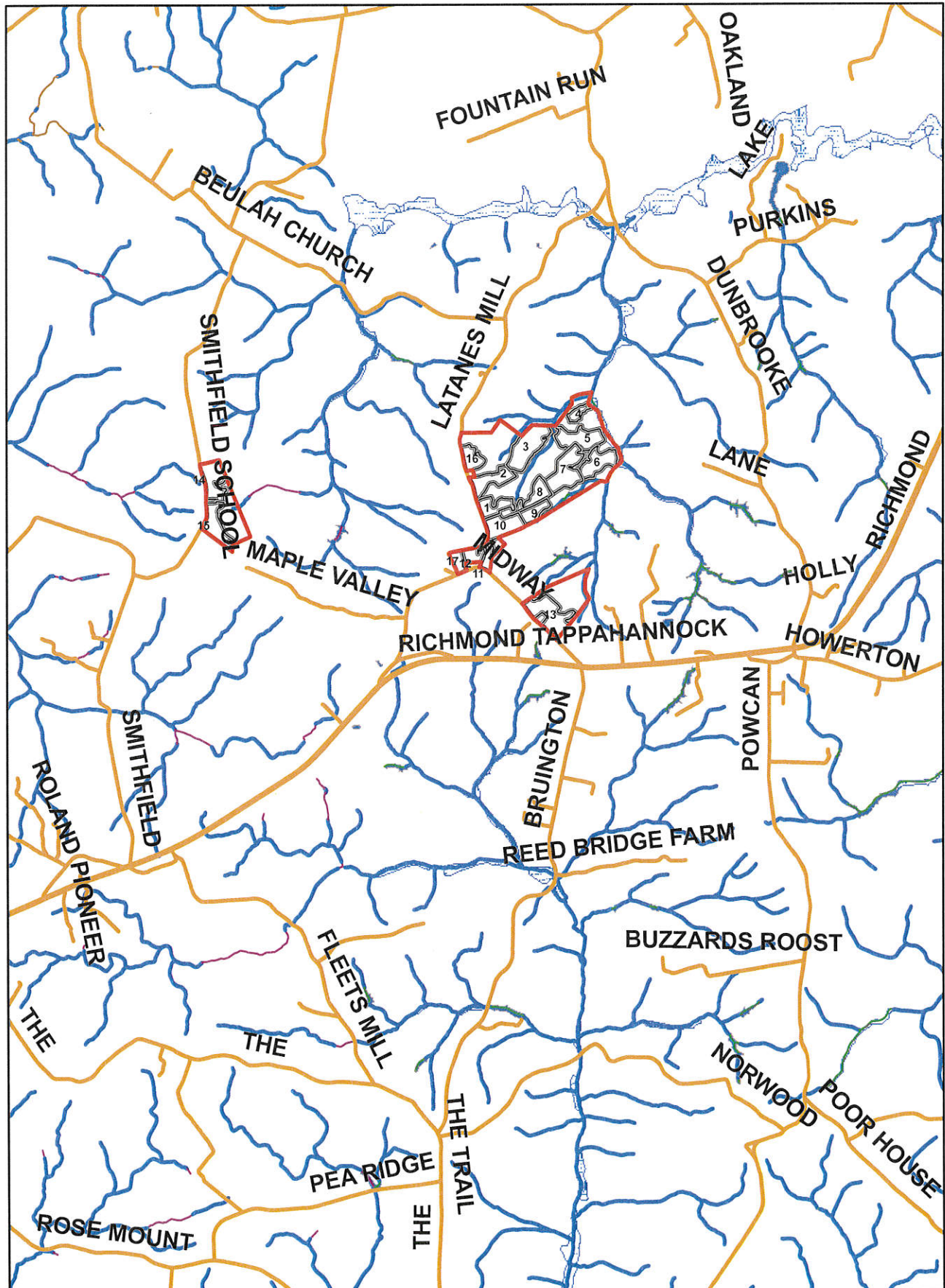
Scale: 1" = 2 miles

EXJRH 1-17

9-6-18

VICINITY MAP

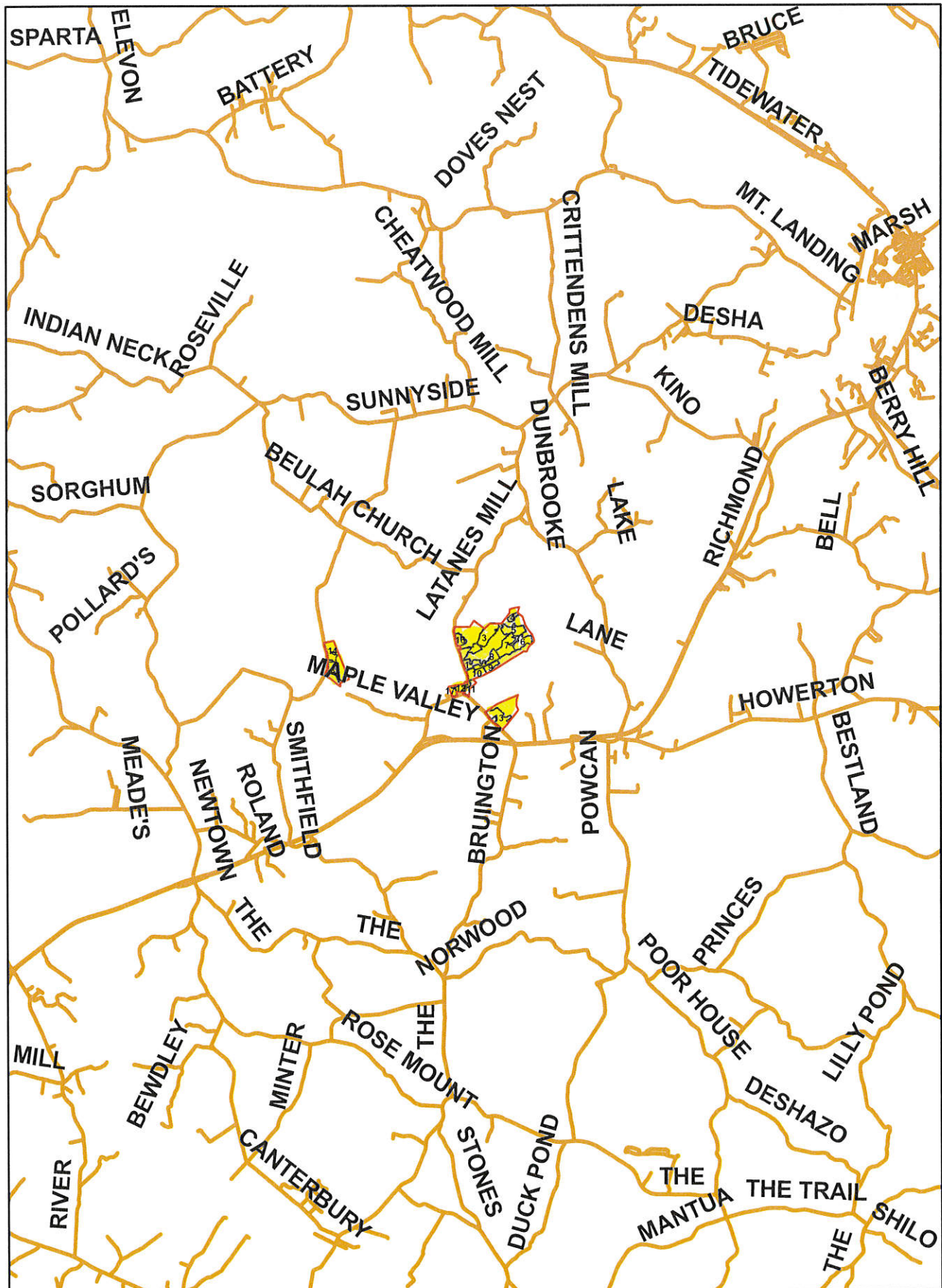




9-6-18

VICINITY MAP

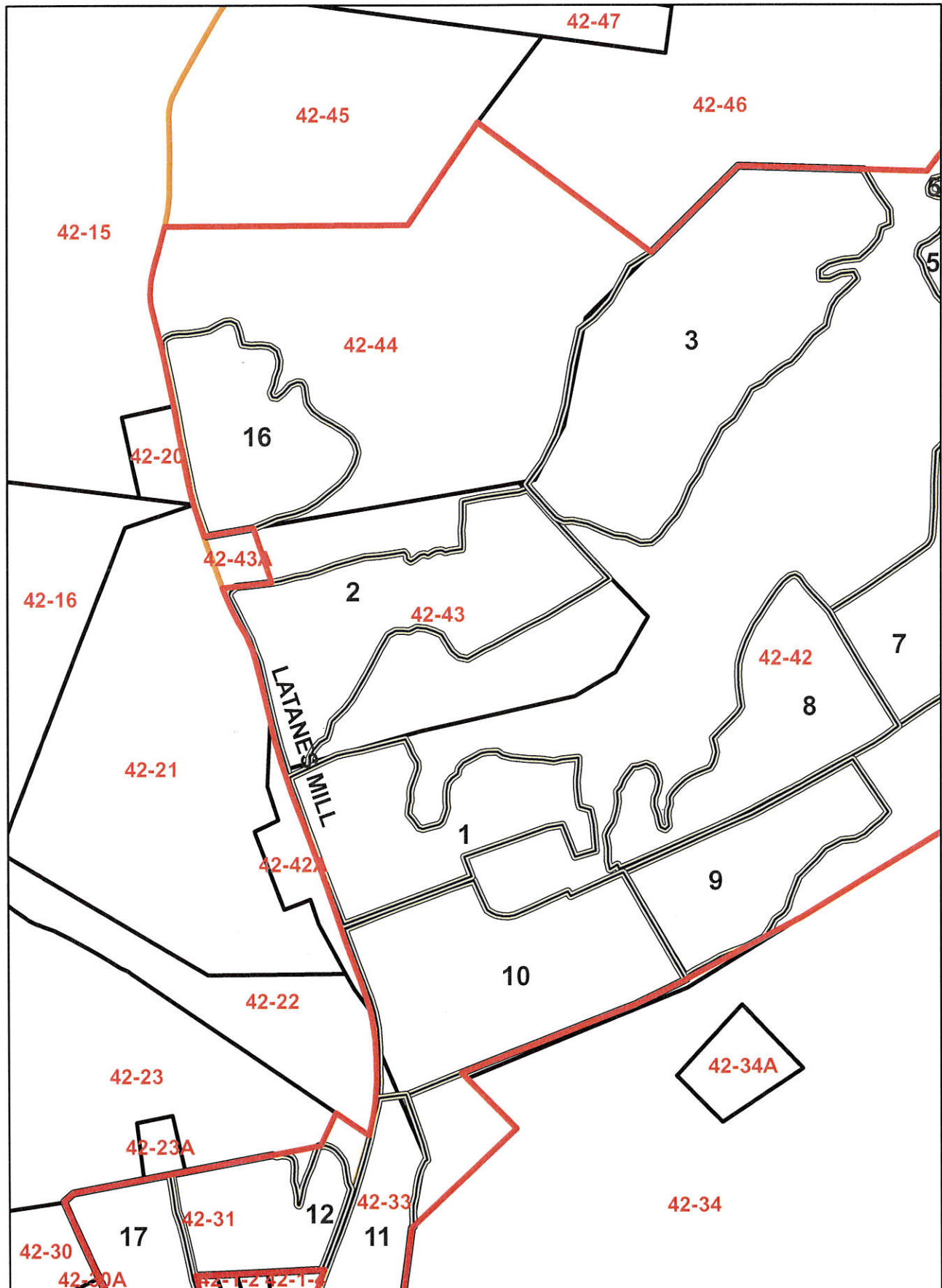
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9-6-18

VICINITY MAP

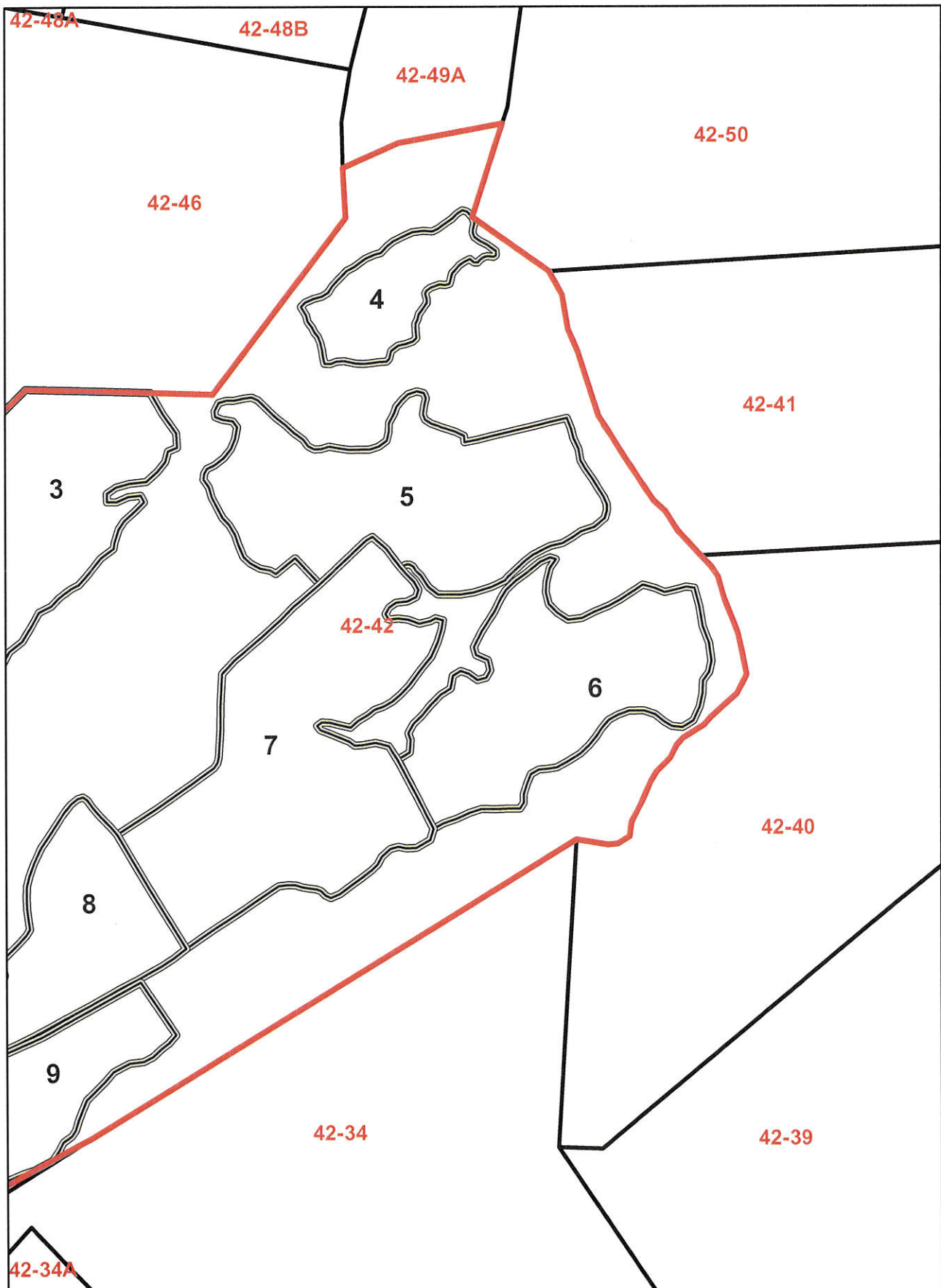
1 in = 2 miles



9-6-18

TAX MAP

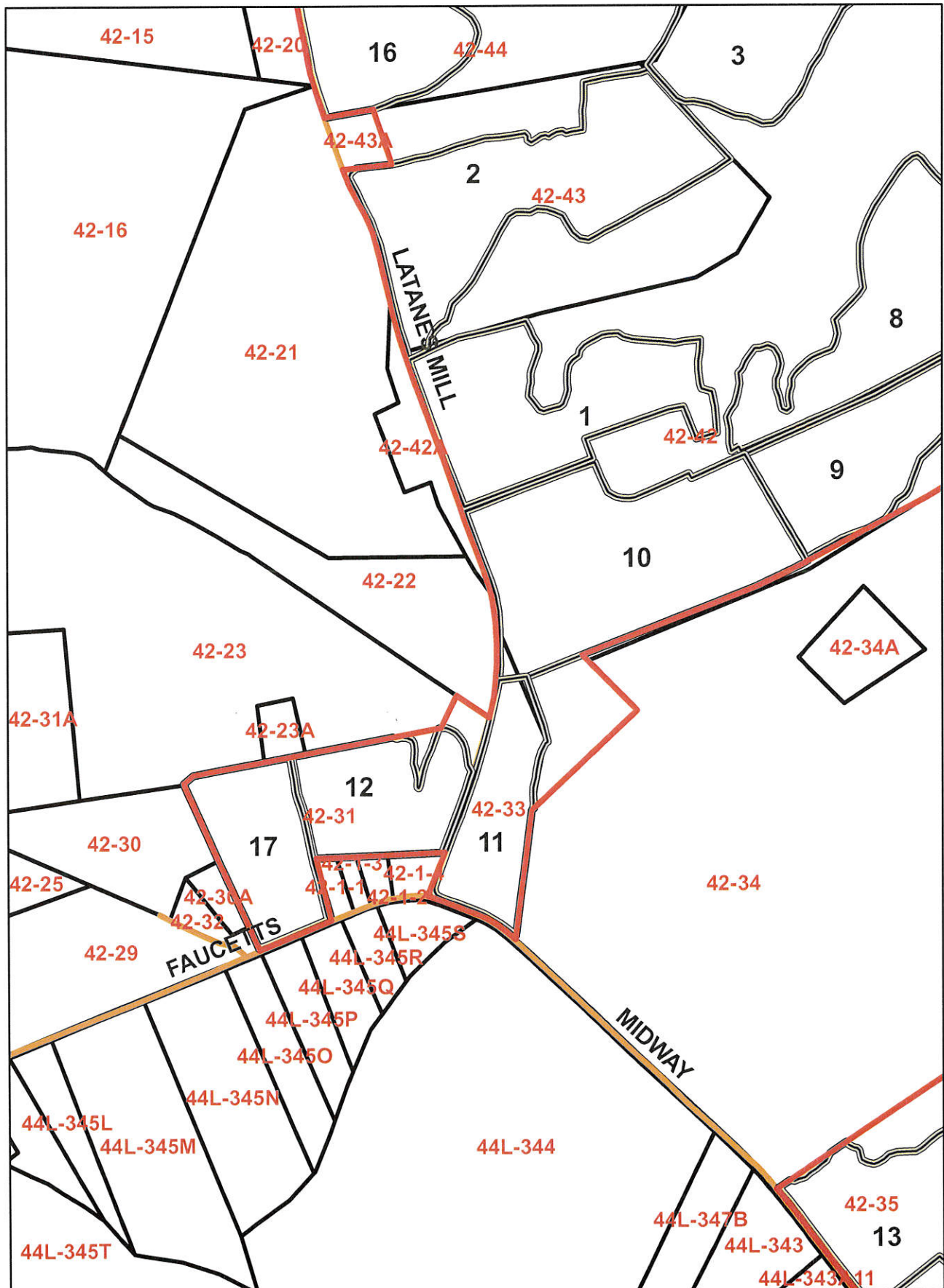
1 in = 660 feet



9-6-18

TAX MAP

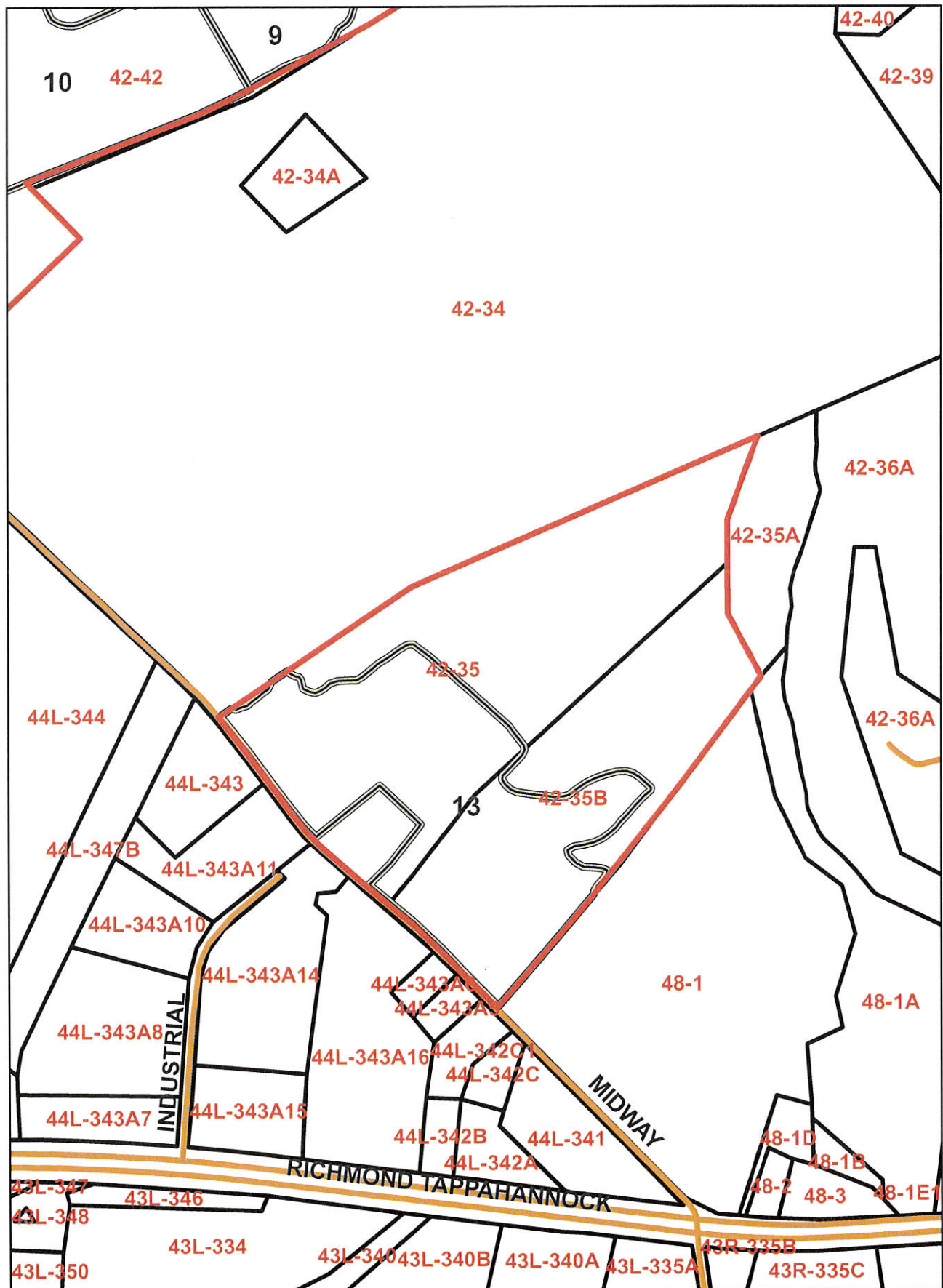
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9-6-18

TAX MAP

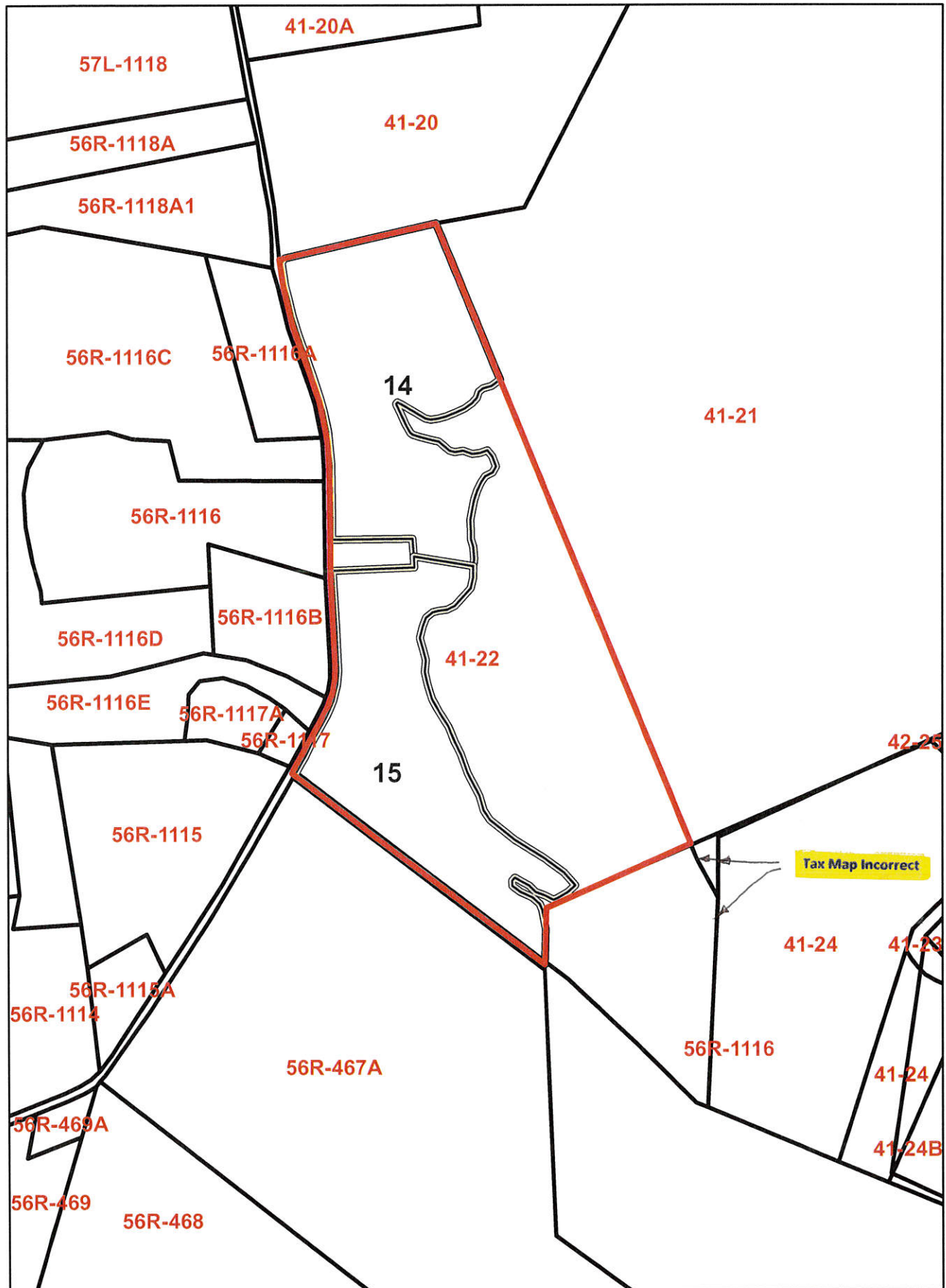
1 in = 660 feet



9-6-18

TAX MAP

1 in = 660 feet



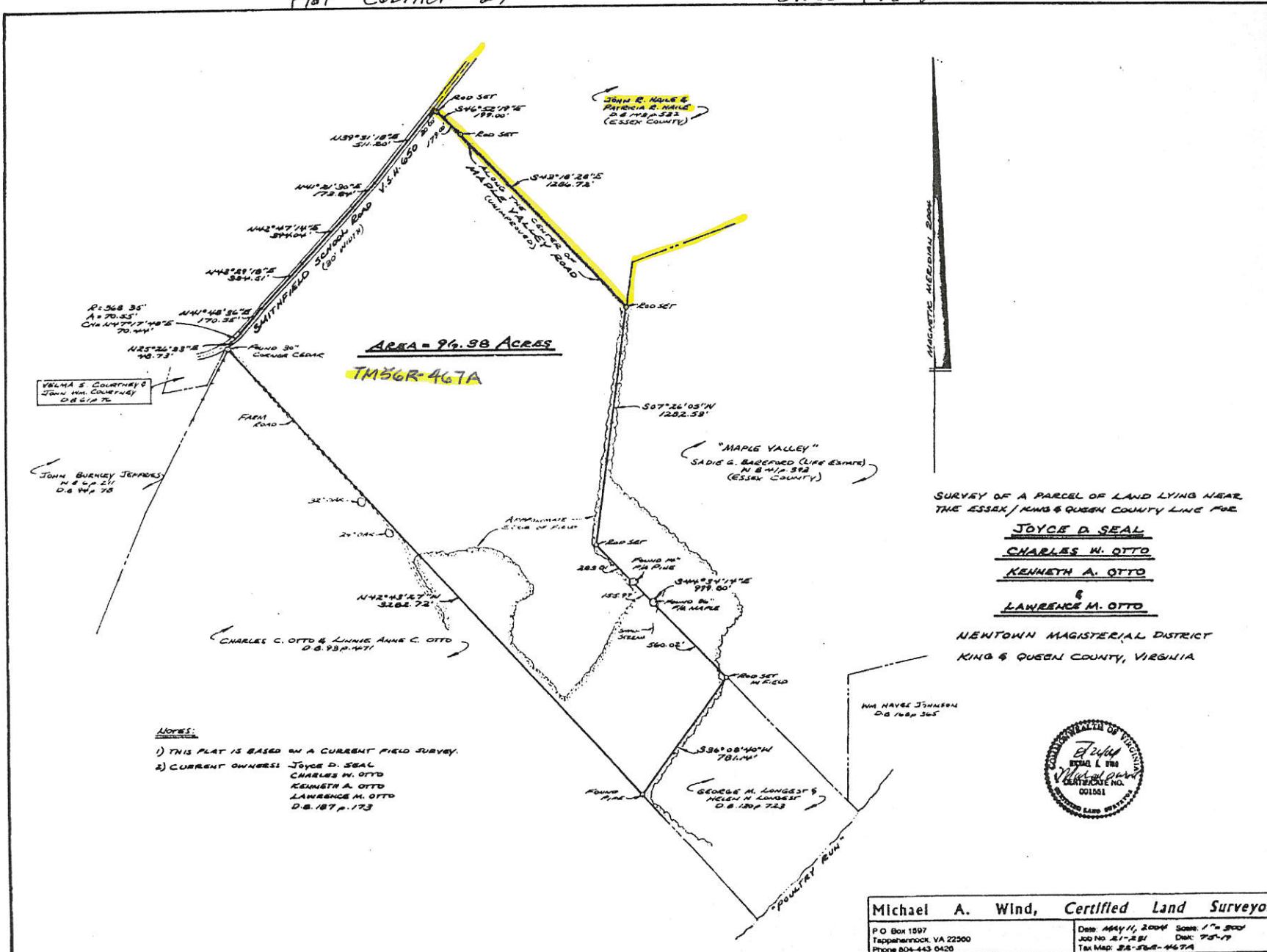
9-6-18

TAX MAP

1 in = 660 feet

Plot Cabinet 2,

Slide 176-2



I, Lawrence M. Otto
as the true and correct boundar

Given under my hand this

NC
STATE OF VIRGINIA,
COUNTY OF Fresh

The foregoing instrument w
day of October, 2004, by



We, Charles W. Otto
and Joyce D. Seal
and correct boundaries of the
Given under my hand this

SURVEY OF A PARCEL OF LAND LYING NEAR
THE ESSEX/KING & QUEEN COUNTY LINE FOR

JOYCE D. SEAL
CHARLES W. OTTO
KENNETH A. OTTO
&
LAWRENCE M. OTTO

NENTOWN MAGISTERIAL DISTRICT
KING & QUEEN COUNTY, VIRGINIA

STATE OF VIRGINIA,
COUNTY OF King & Queen
The foregoing instrument
8th day of November 200
Kenneth A. Otto



VIRGINIA: IN THE CLERK'S OFF
QUEEN COUNTY, Nov
THIS PLAT was presented
admitted to record at 12.36 o

ADJOINING LANDOWNERS

John R. Haile

ESSEX COUNTY

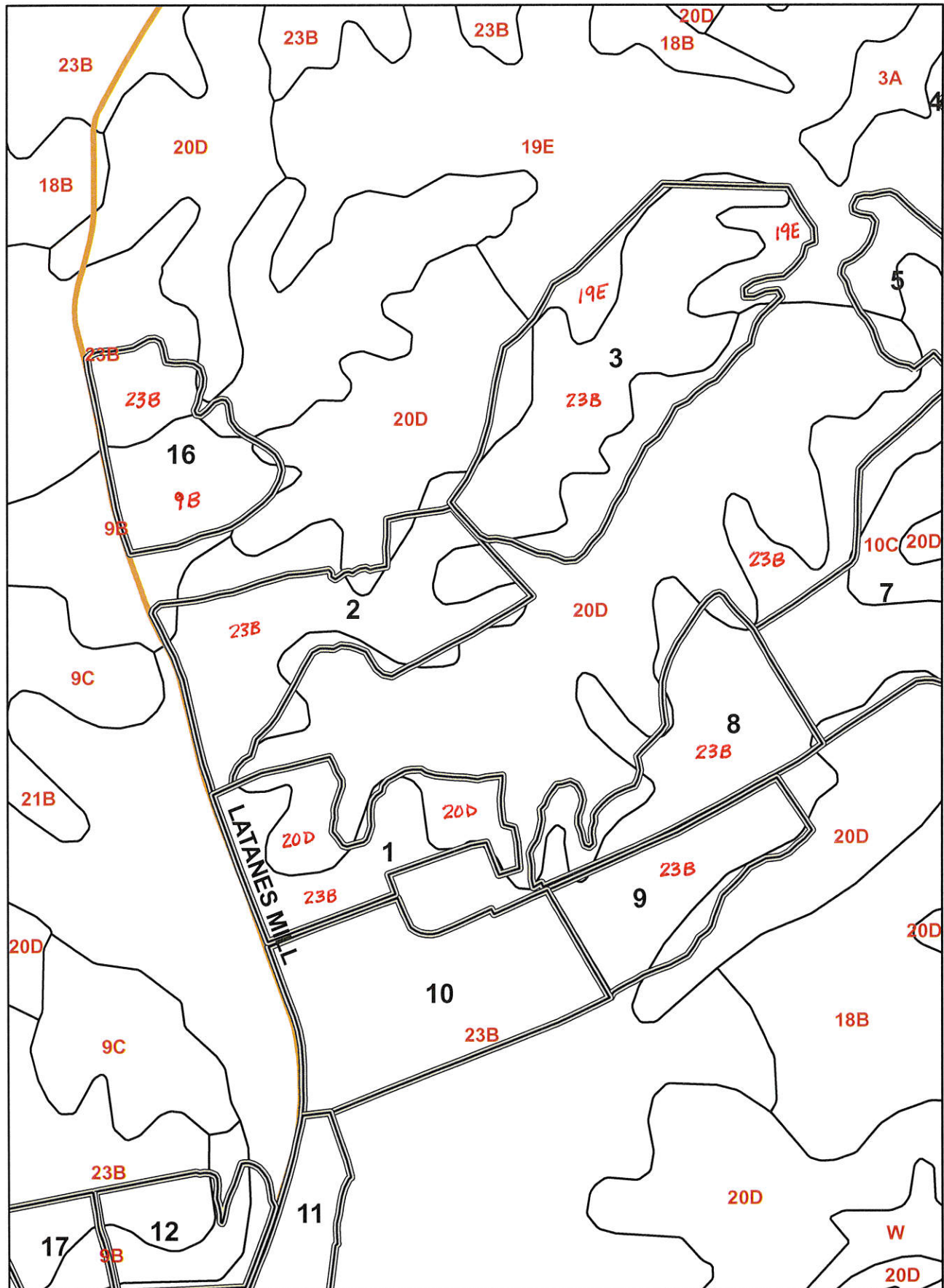
Tax Map	Parcel #	Owner Name(s)
41	20	Shirley Chenault Parker et. al.
	21	Carter Lumber Co Inc.
	24	Janet L. Bareford
42	12	James R. Johnson
	21	Hylah H. Boyd
	22	Hylah H. Boyd
	23	Mary R. Moore et. als.
	23A	Auguston N. Holmes
	30	John R. Haile Trustee
	30A	Shirley Johnson
	34	Charlottes Haile Frischkorn et. al. Trustee
	34A	John F. Haile
	35A	John R. and Patricia R. Haile
	36A	Timber Resources LLC
	39	John R. Kline II
	40	William E. Lane
	41	Nathan P. Ball
	42A	John R. and Patricia R. Haile Trustee
	46	John R. and Patricia R. Haile Trustee
	48B	Chery L. Bache
	49A	Jonah W. Brooks
	50	Nathan P. Ball
42-1	1	John F. Haile
	2	Vincent Johnson
	3	John F. Haile
	4	Kenneth Garnett
48	1	Stephen M. Norman
	1A	St. Pauls Episcopal Church

ADJOINING LANDOWNERS

John R. Haile

KING AND QUEEN COUNTY

Tax Map	Parcel #	Owner Name(s)
1625-44L-	341	Stephen and Karol Norman
	342C	Willie Floyd Tate Estate
	342C-1	Jerry and Evelyn Brightwell
	343	Midway Farm Properties LLC
	343-1	Midway Farm Properties LLC
	343-A5	Mary D. Beadles Life Estate
	343-A6	Brenda Garnett
	343A-11	Quyen V. Pham
	343A-14	Marriott School LLC
	343A-16	Timber Resources LLC
	344	Lane Richmond Estate
	345O	Robert Tallent
	345P	Sonya Washington
	345Q	Elton Farm Business Trust
	345R	Harold Sayles
	345S	Elton Farm Business Trust
1632-56R-	467A	Kenneth and Lawrence Otto
	1115	Diane and Anthony Kendall
	1116	Herbert F. Seay
	1116A	Lindbergh and Bernice Wilson
	1116B	Thomas and Robin Paine
	1116E	Thomas and Robin Paine
	1117	Laurie C. Akers
	1118A	James B. Wilson
	1118A-1	James B. Wilson



9-6-18

SOIL MAP

1 in = 660 feet



Frequent
Flooding

[illegible]

9-6-18

 Frequent Flooding

SOIL MAP

1 in = 660 feet

[illegible]

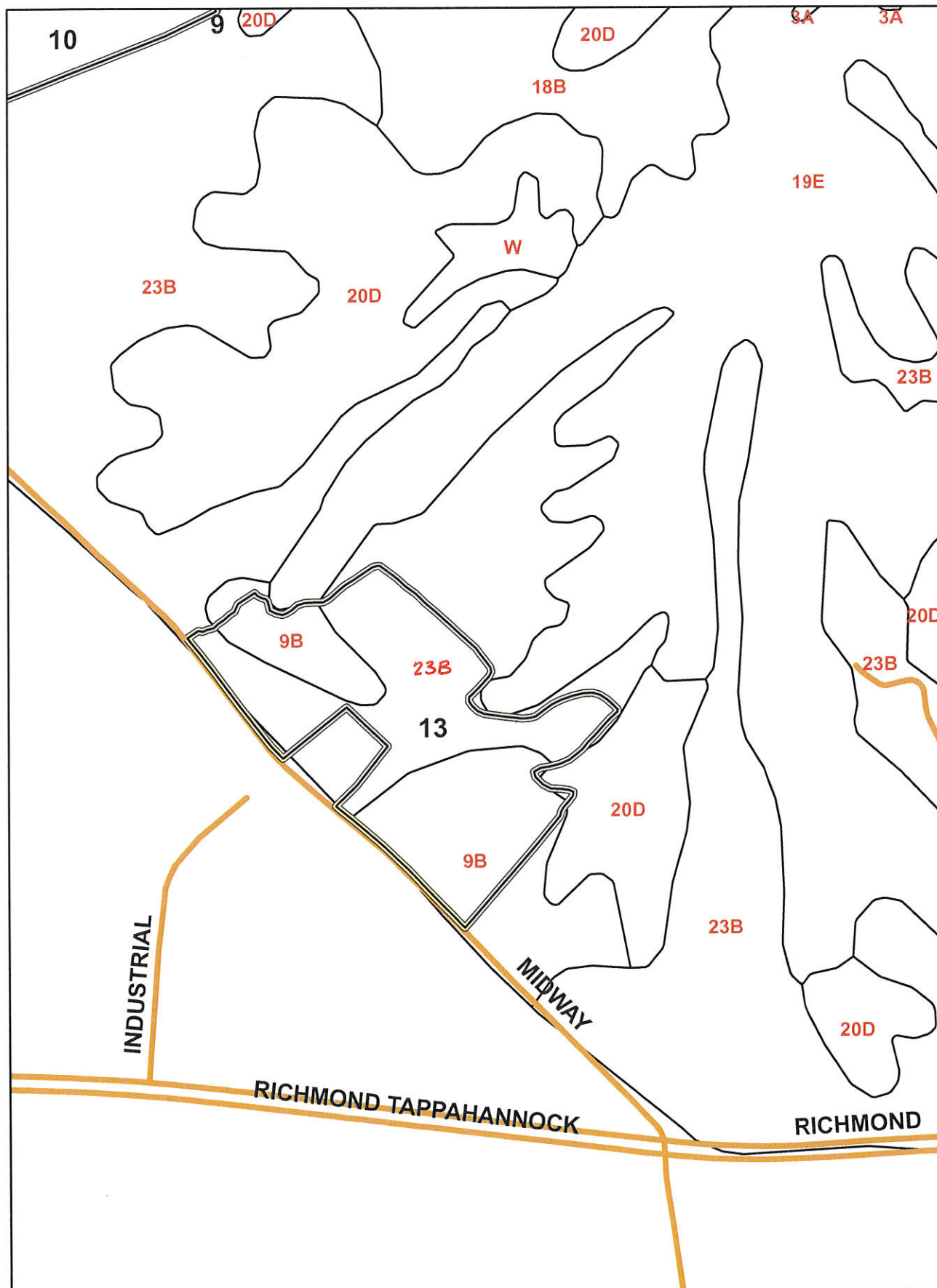
9-6-18

SOIL MAP

1 in = 660 feet



Frequent Flooding

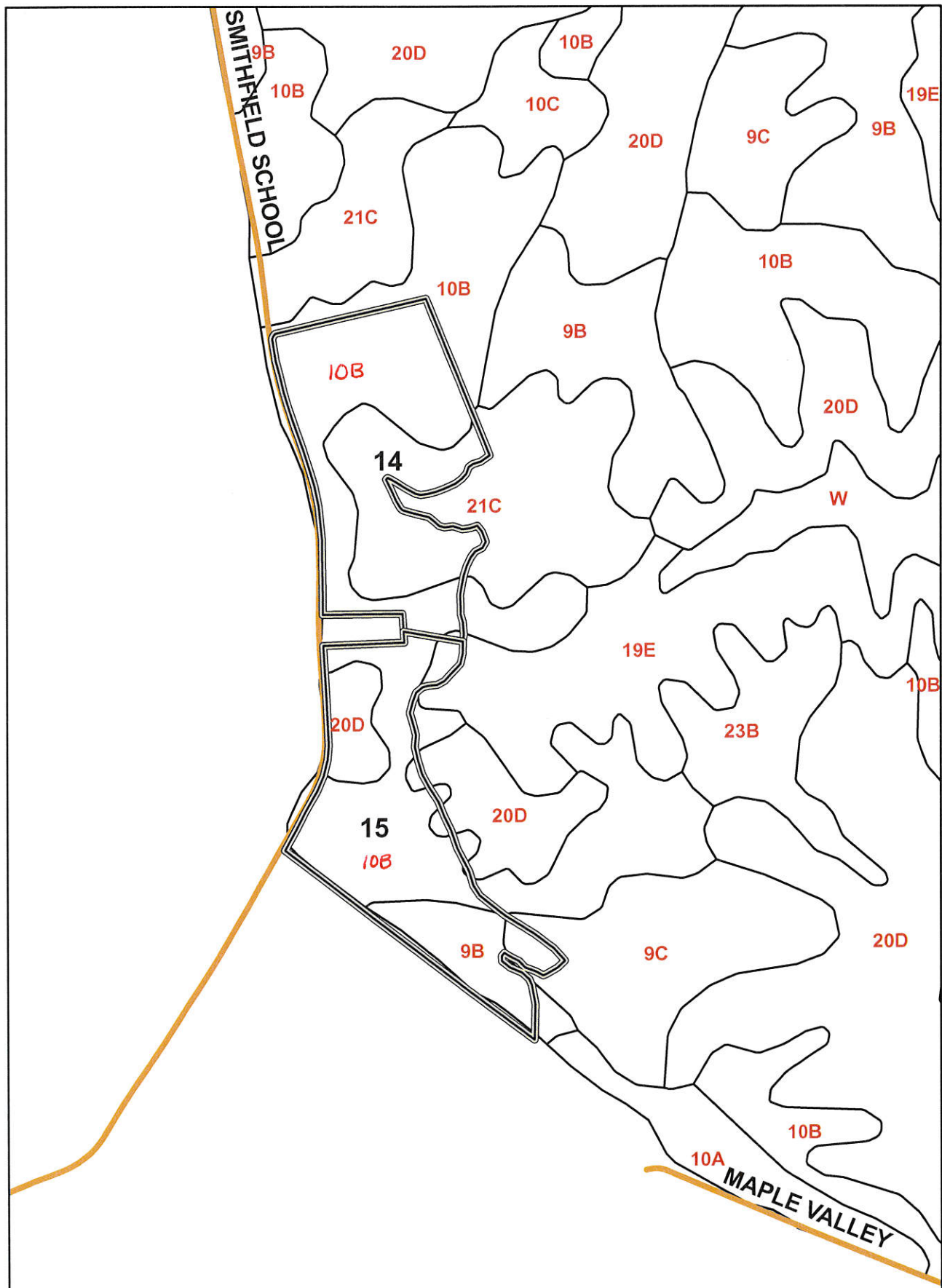


9-6-18

SOIL MAP

1 in = 660 feet

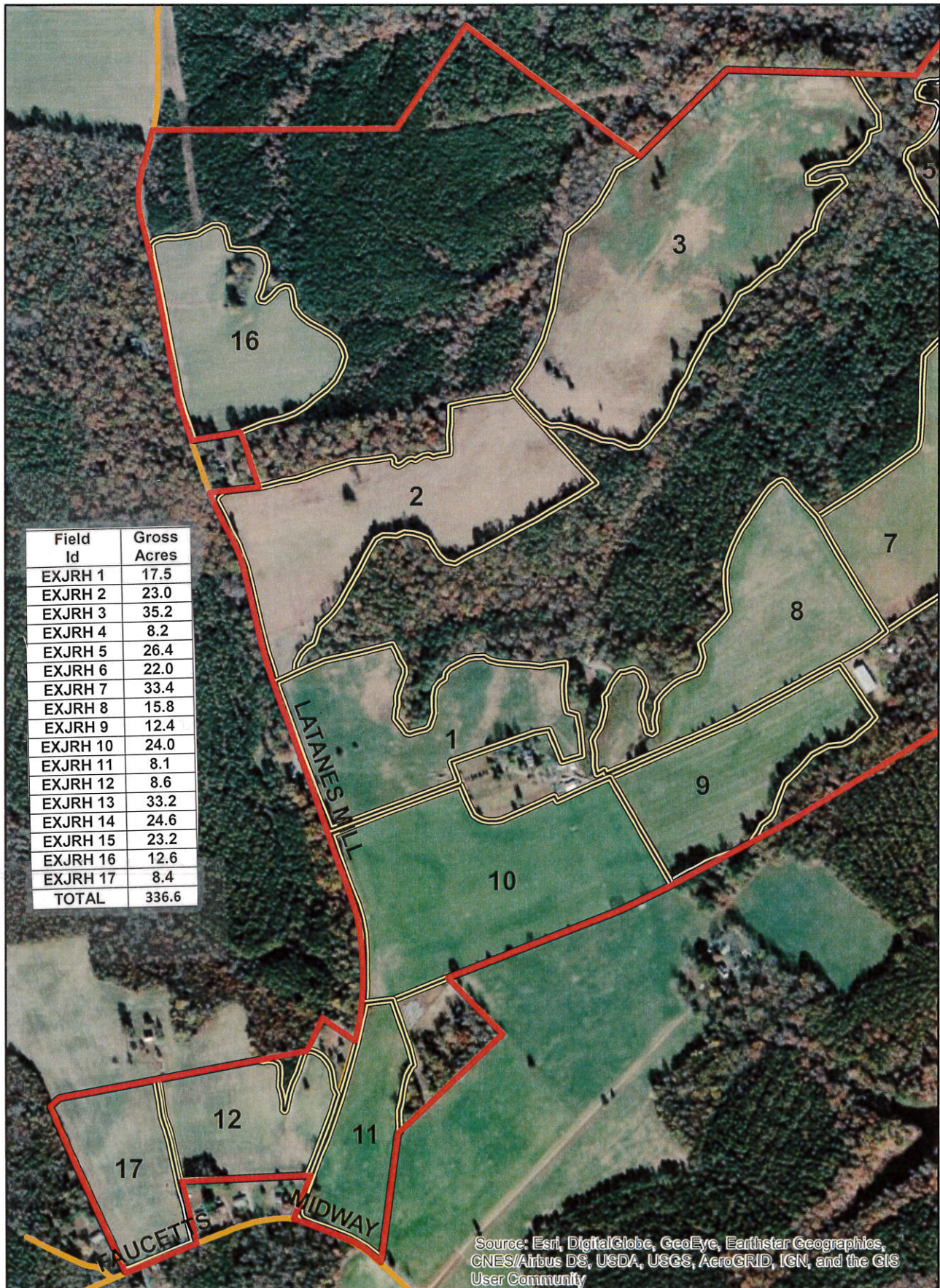
 Frequent
Flooding



9-6-18
Frequent
Flooding

SOIL MAP

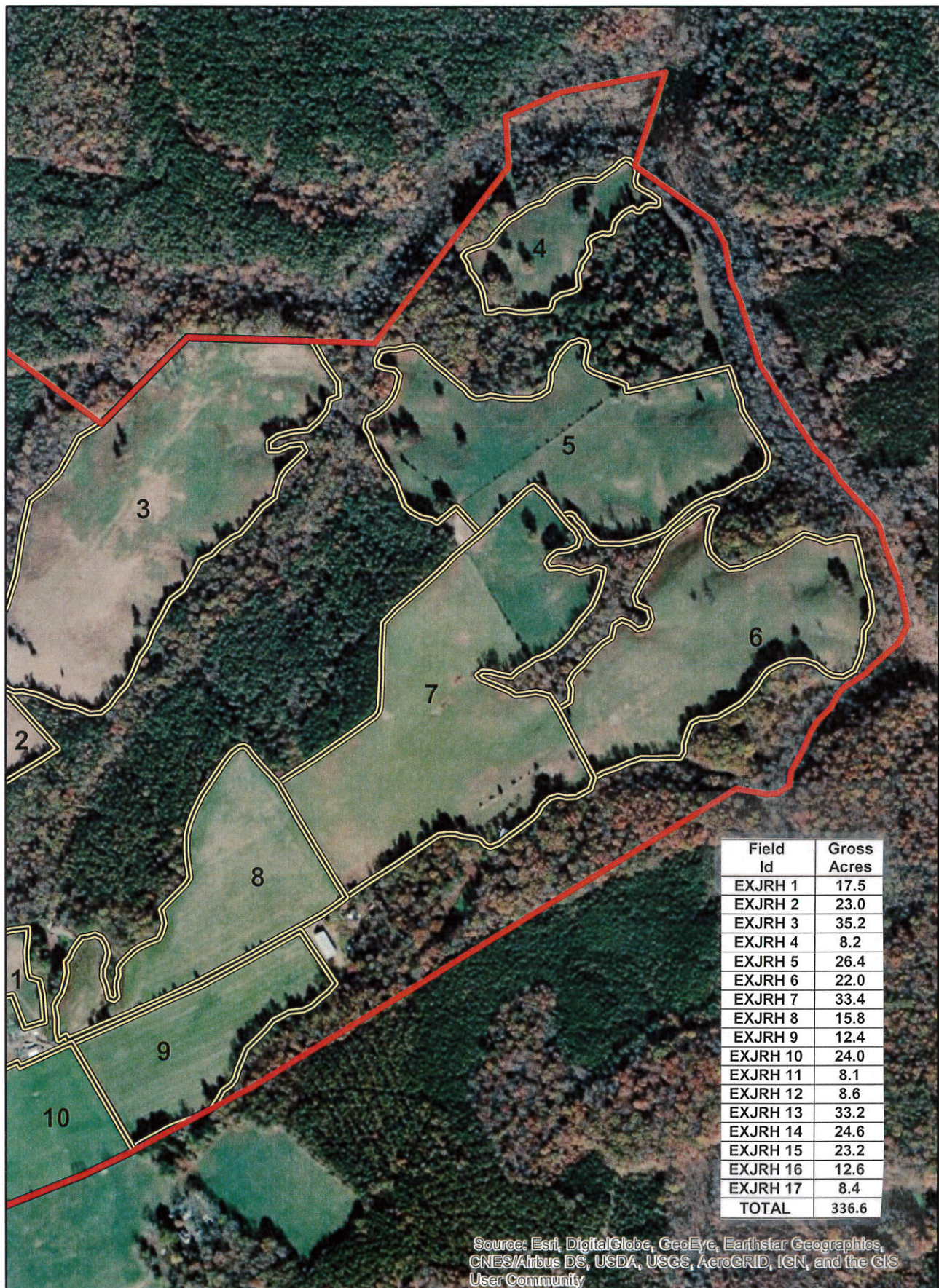
1 in = 660 feet



9-6-18

AERIAL MAP

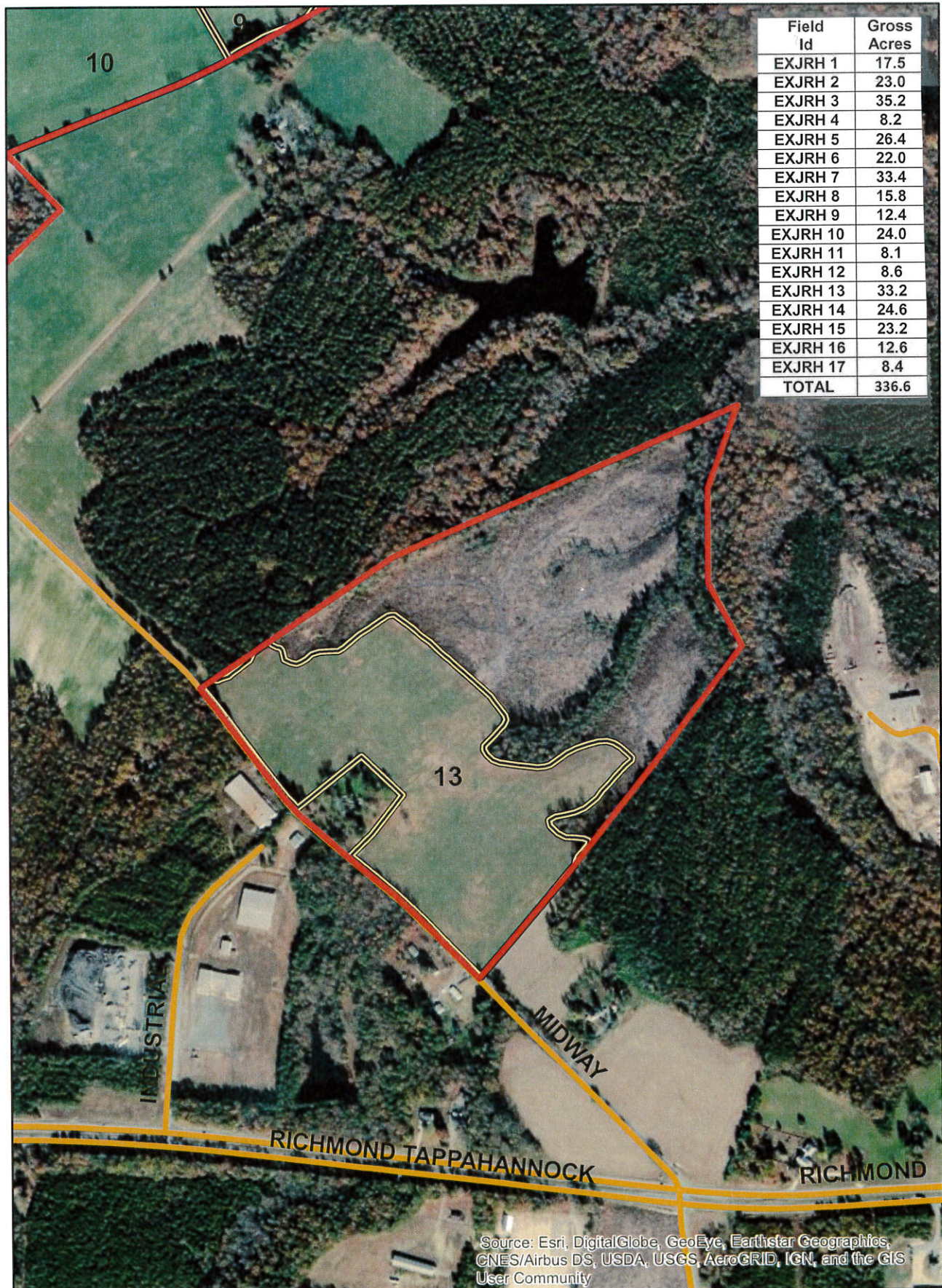
1 in = 660 feet



9-6-18

AERIAL MAP

1 in = 660 feet



9-6-18

AERIAL MAP

1 in = 660 feet



9-6-18

AERIAL MAP

1 in = 660 feet

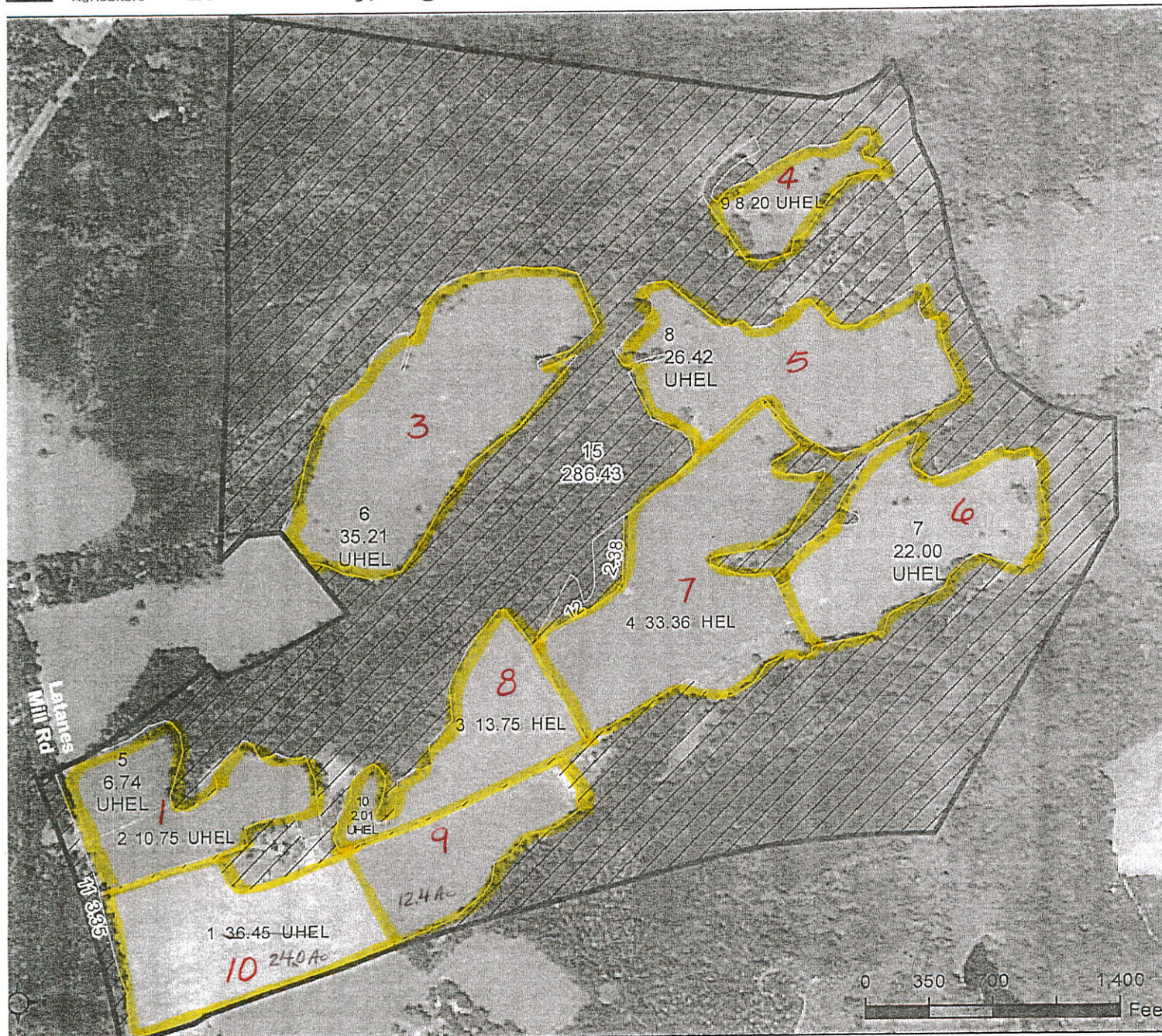


United States
Department of
Agriculture

Essex County, Virginia

Tract 744

Farm 2258



2018 Program Year

Map Created May 15, 2018

Common Land Unit

Non-Cropland
Cropland
rcl_va057

Tract Boundary

NAIP/USDA_CONUS_PRIME

RGB

Red: Band_1
Green: Band_2
Blue: Band_3

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 194.89 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly to the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage or loss resulting from any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact

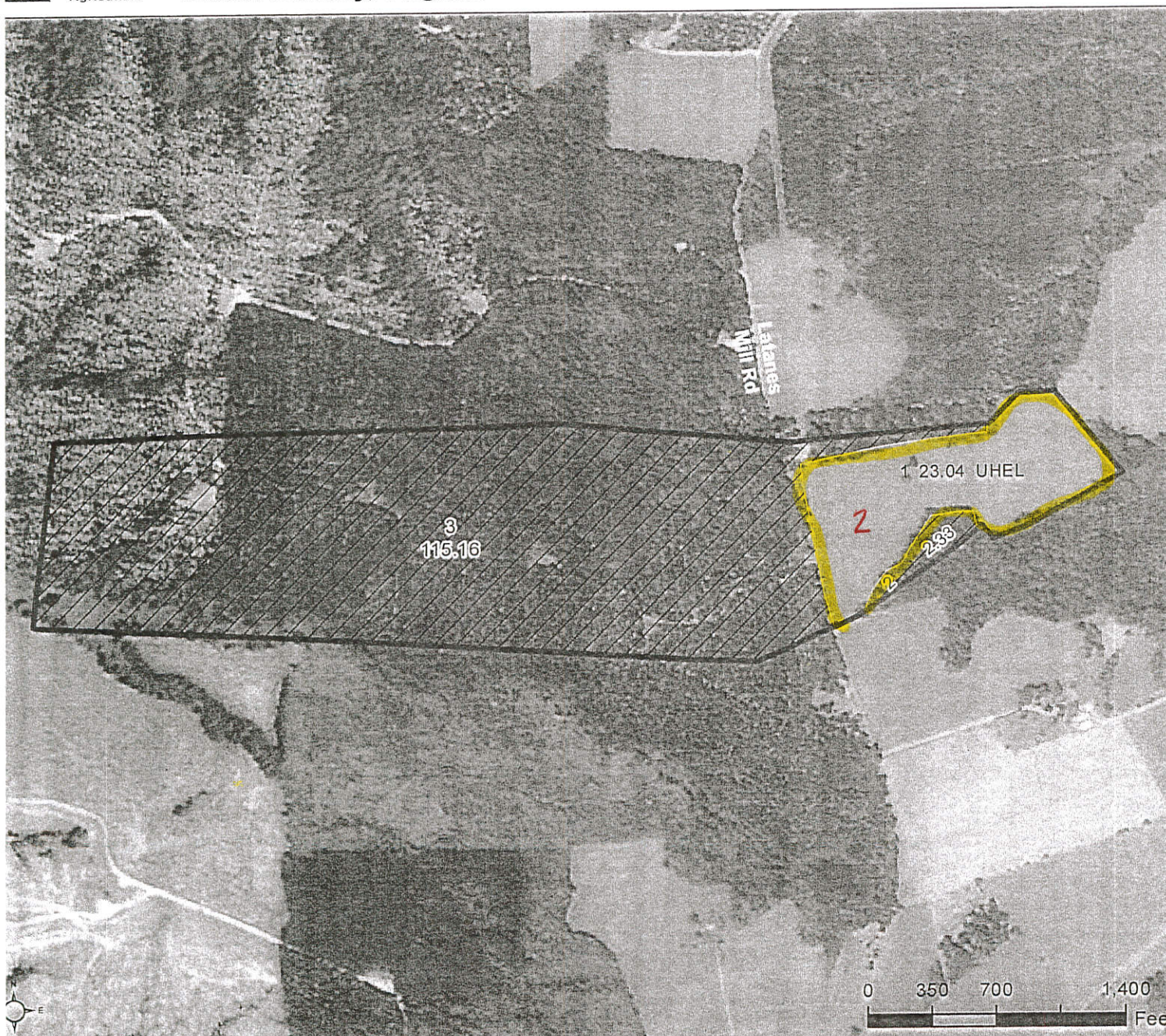


United States
Department of
Agriculture

Essex County, Virginia

Tract 385

Farm 2258



2018 Program Year

Map Created May 15, 2018

Common Land Unit

- / Non-Cropland
- Cropland
- rcl_l_va057

Tract Boundary

NAIPUSDA_CONUS_PRIME

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 23.04 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly by the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage caused as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland determinations consistent with USDA Natural Resources Conservation Service (NRCS).

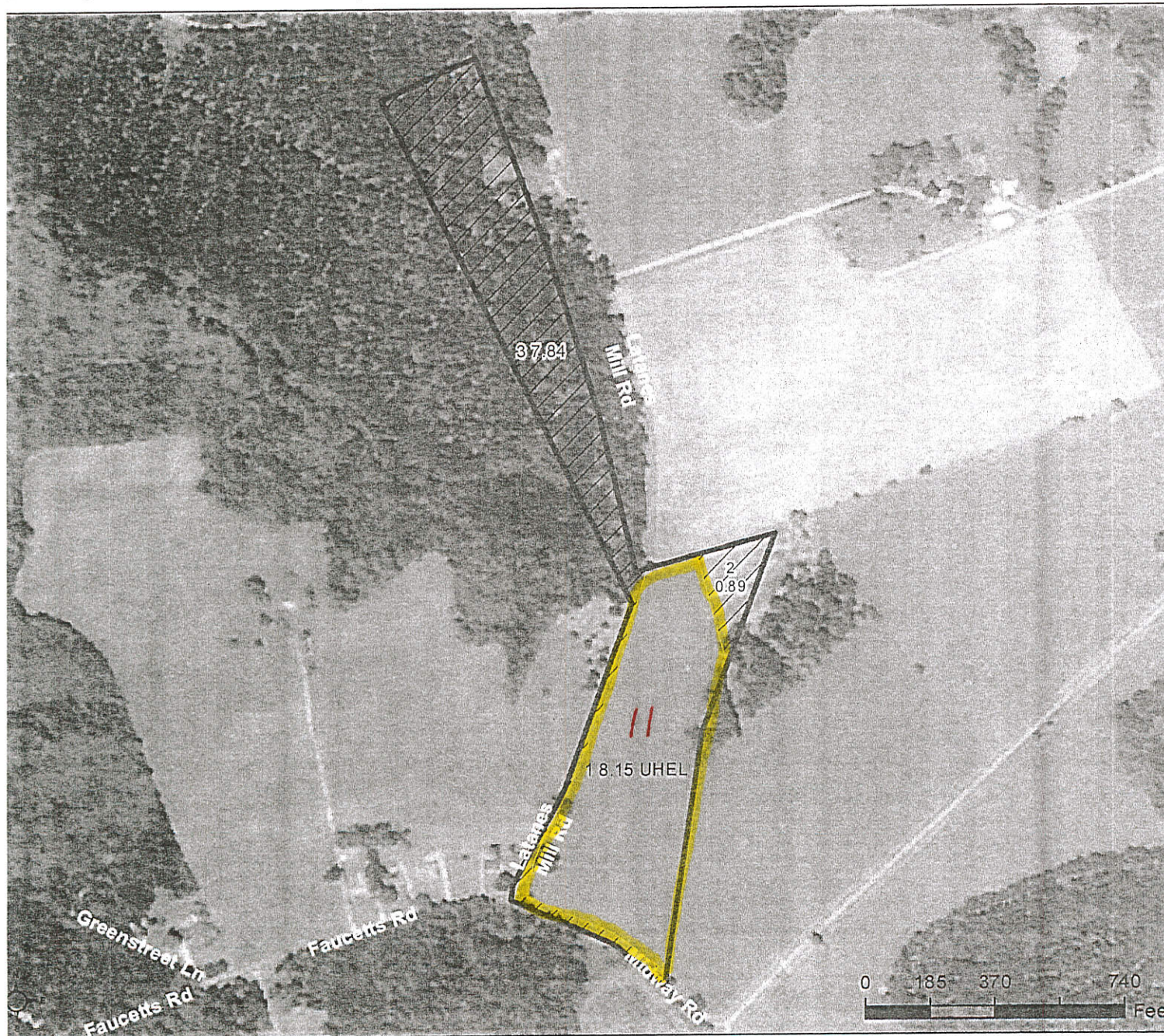


United States
Department of
Agriculture

Essex County, Virginia

Tract 425

Farm 2258



2018 Program Year

Map Created May 15, 2018

Common Land Unit

Non-Cropland
Cropland
rcl_va057

Tract Boundary

NAIP\USDA_CONUS_PRIME

RGB

Red: Band_1
Green: Band_2
Blue: Band_3

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 8.15 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly by the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage caused as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact

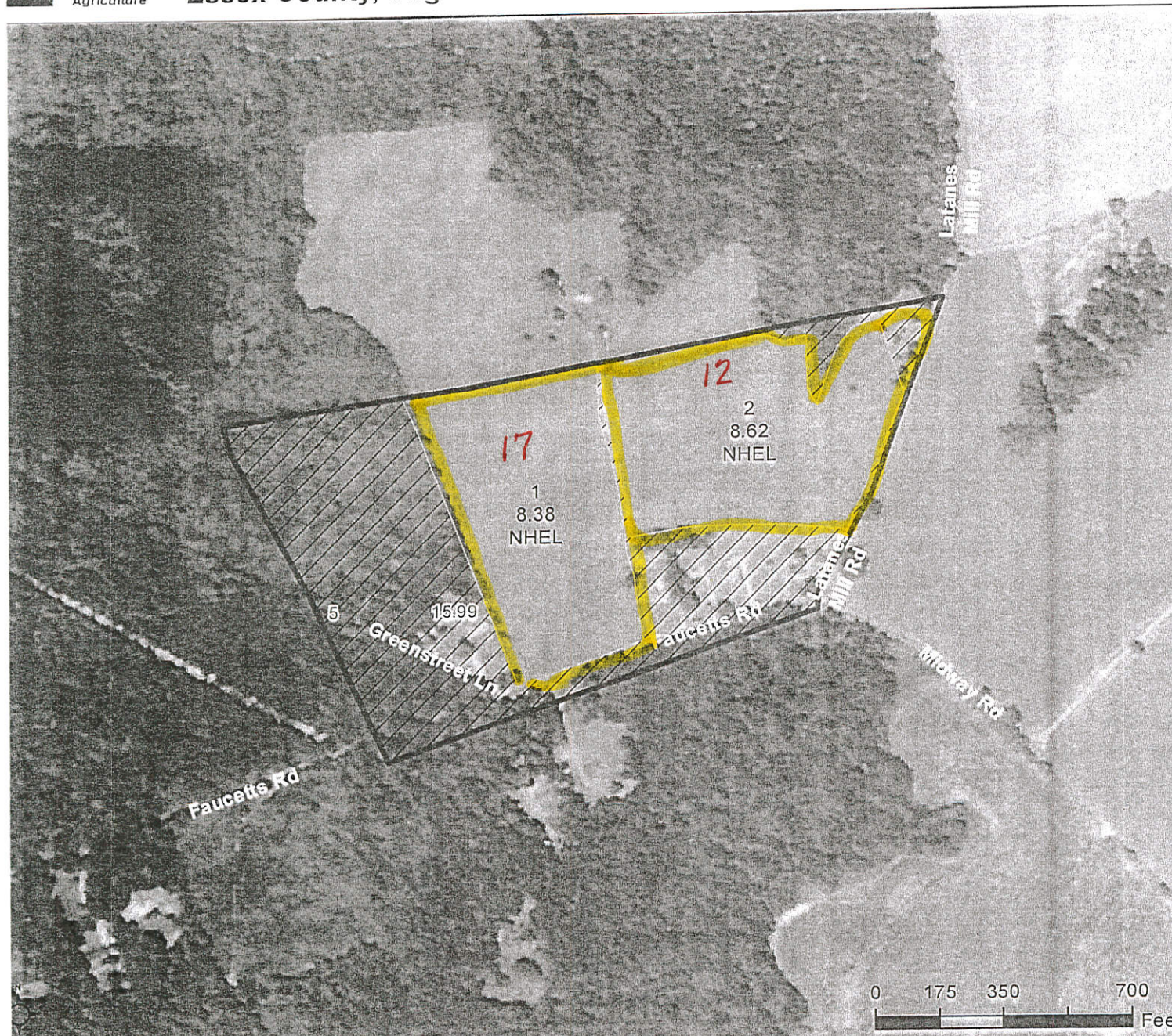


United States
Department of
Agriculture

Essex County, Virginia

Tract 401

Farm 2258



2018 Program Year

Map Created May 15, 2018

Common Land Unit

Non-Cropland
Cropland
rcl_l_va057

Tract Boundary

NAIP\USDA_CONUS_PRIME

RGB

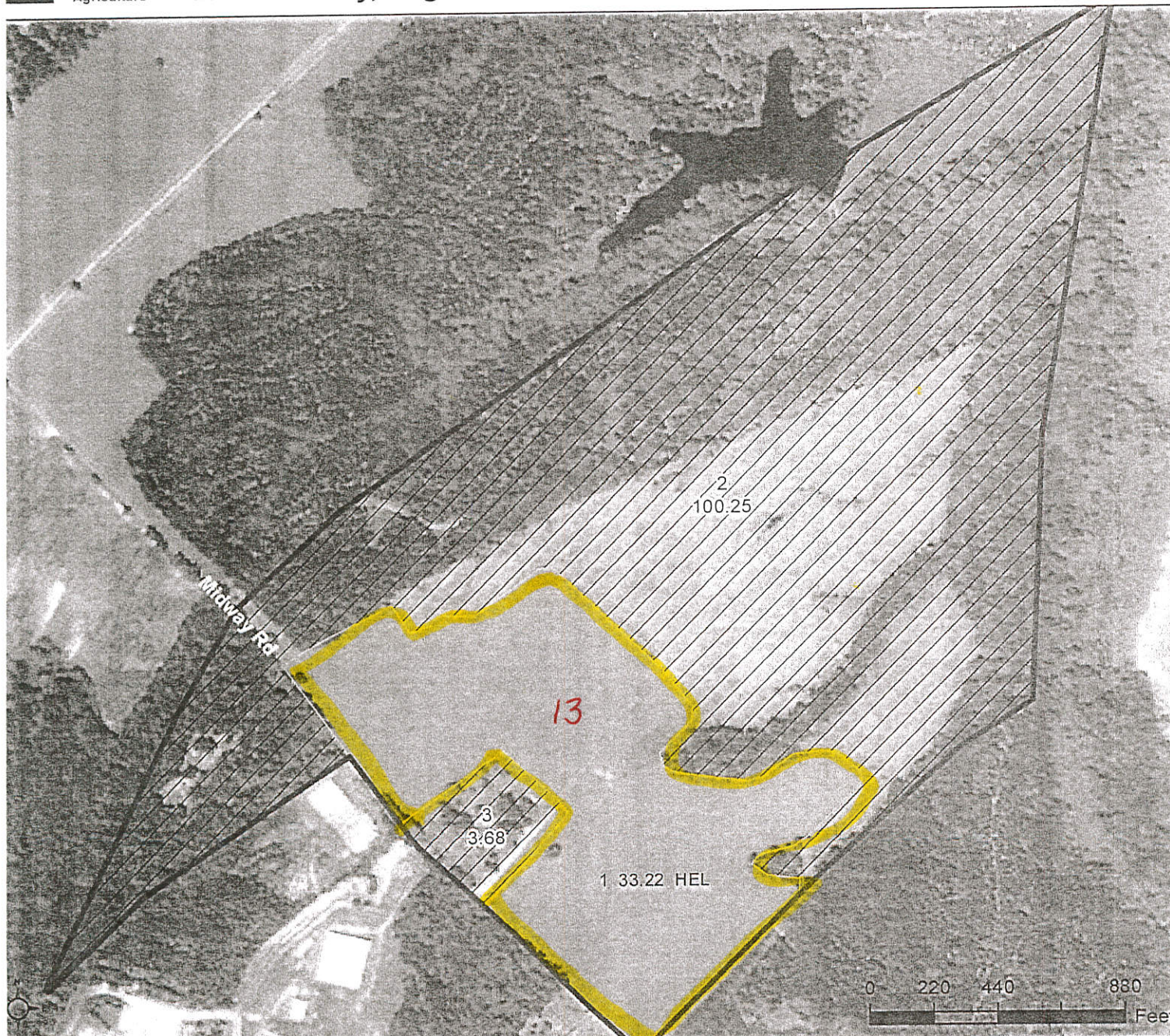
Red: Band_1
Green: Band_2
Blue: Band_3

Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 17.00 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly to the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland information.



2018 Program Year

Map Created May 15, 2018

Common Land Unit

Non-Cropland
Cropland
rcl_l_va057

Tract Boundary

NAIPUSDA_CONUS_PRIME

RGB

Red: Band_1
Green: Band_2
Blue: Band_3

**Wetland Determination
Identifiers**

● Restricted Use
▽ Limited Restrictions
□ Exempt from Conservation
Compliance Provisions

Tract Cropland Total: 33.22 acres

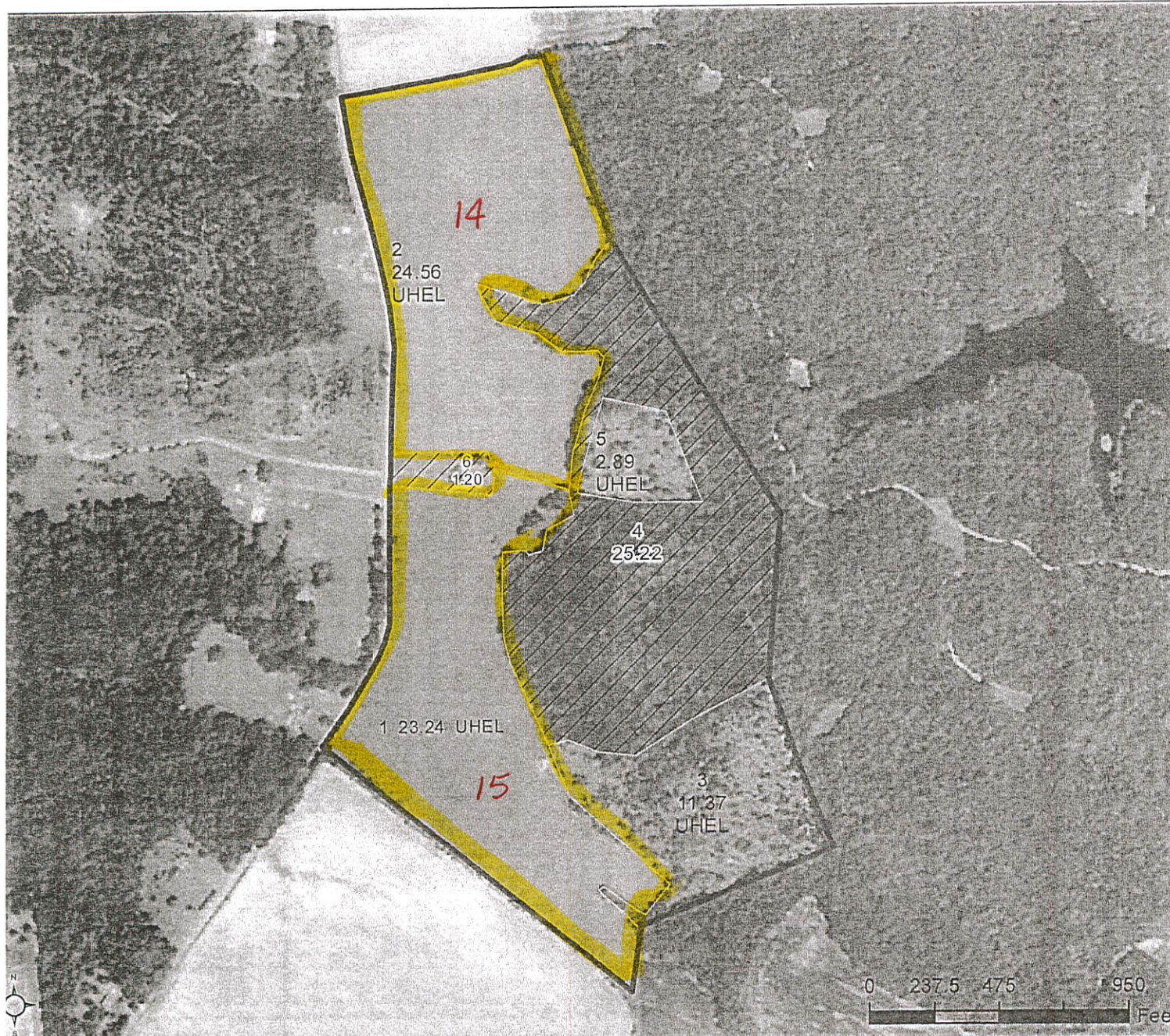


United States
Department of
Agriculture

Essex County, Virginia

Tract 797

Farm 2258



2018 Program Year

Map Created May 15, 2018

Common Land Unit

- Non-Cropland
- Cropland

Tract Boundary

NAIP/USDA_CONUS_PRIME

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 62.06 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly to the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage caused as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations consistent with USDA Natural Resource Conservation Service (NRCS).

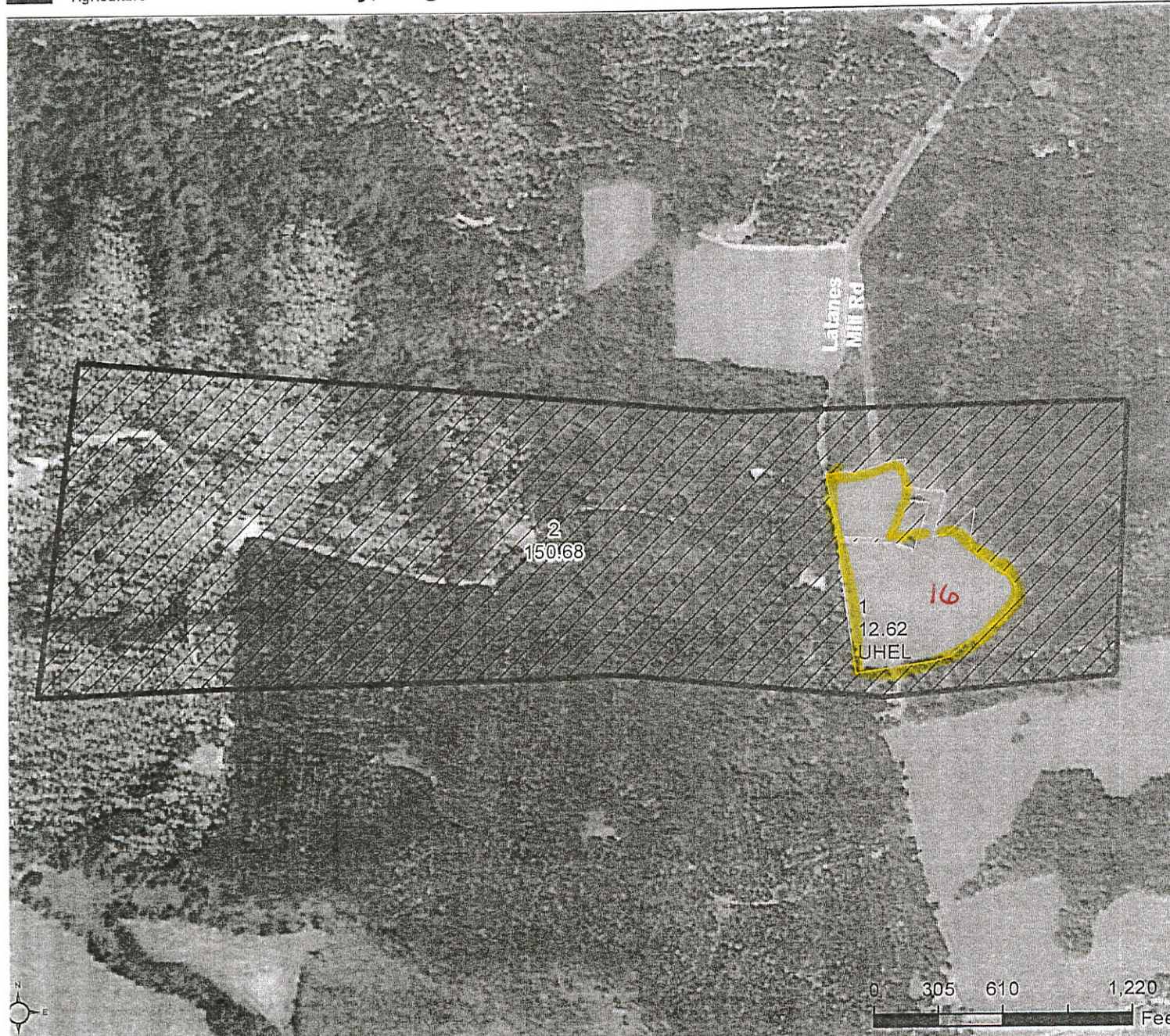


United States
Department of
Agriculture

Essex County, Virginia

Tract 749

Farm 2053



2018 Program Year

Map Created May 15, 2018

Common Land Unit

Non-Cropland
Cropland
rcl_l_va057

Tract Boundary

NAIP\USDA_CONUS_PRIME

RGB

Red: Band_1
Green: Band_2
Blue: Band_3






















**Wetland Determination
Identifiers**

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

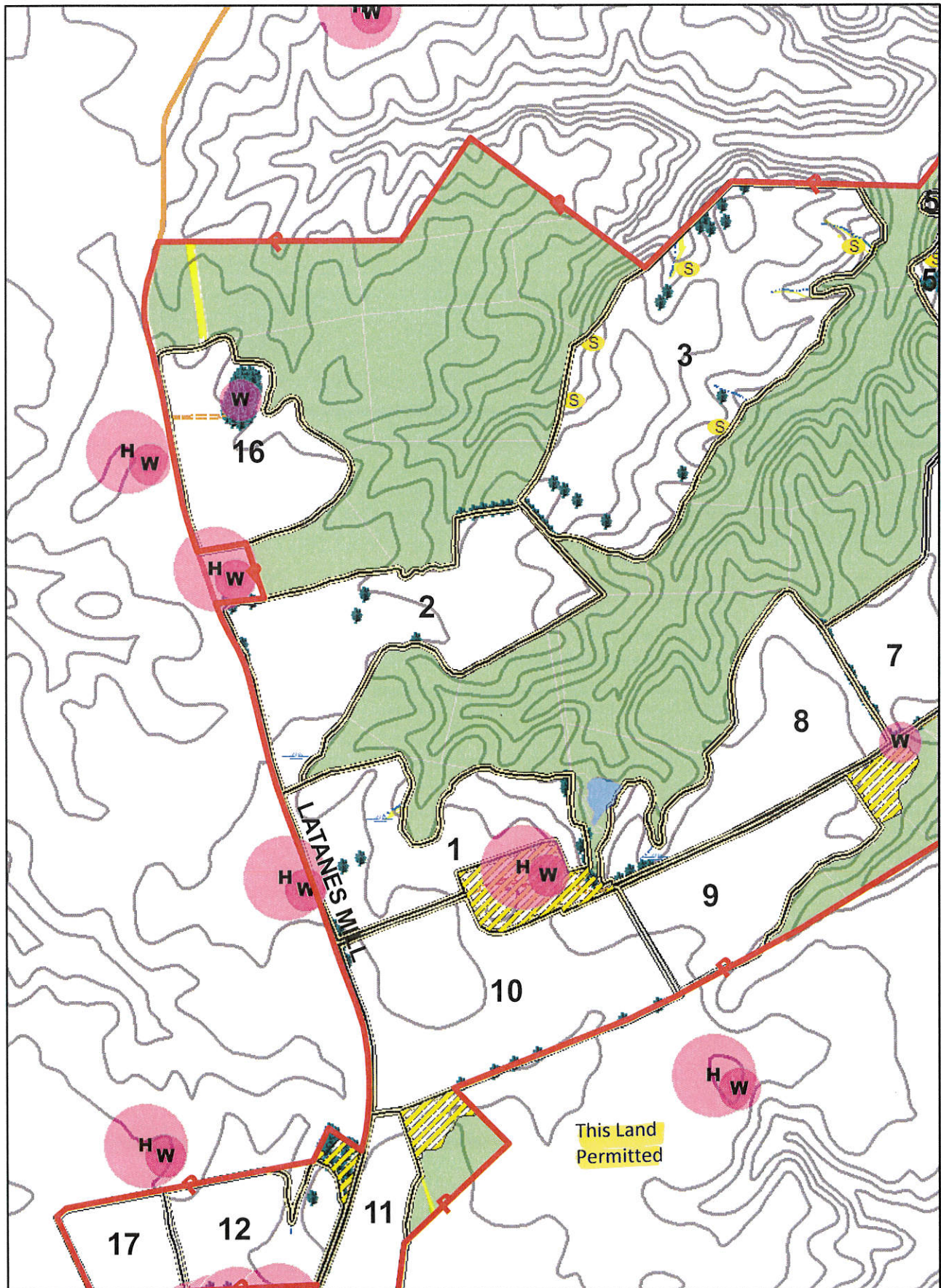
Tract Cropland Total: 12.62 acres

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly to the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage caused as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact

Legend For Site Plan

Symbol	Feature	Minimum Setback
	House and Well	200 feet from occupied dwelling * 100 feet from water supply wells or springs
 	Well or Spring	100 feet from water supply wells or springs
 	Streams or Surface Water	35 feet with 35 foot vegetated buffer 100 feet without vegetated buffer
	Wet Spot	
	Trees and Woods	
	Private Drive	
	Rock Area/Rock Outcrop	25 feet from rock outcrops 50 feet from limestone rock outcrops
	Severely Eroded Spot	18 Inch minimum depth of soil
  	Sink Hole	100 feet from open sinkholes 50 feet from closed sinkholes
	State Road	10 feet from side of roadway
	Fence / Field Boundary	
  	Property Line	100 feet from property line *
 	Slope	15% maximum
	Hashed out Area	No application

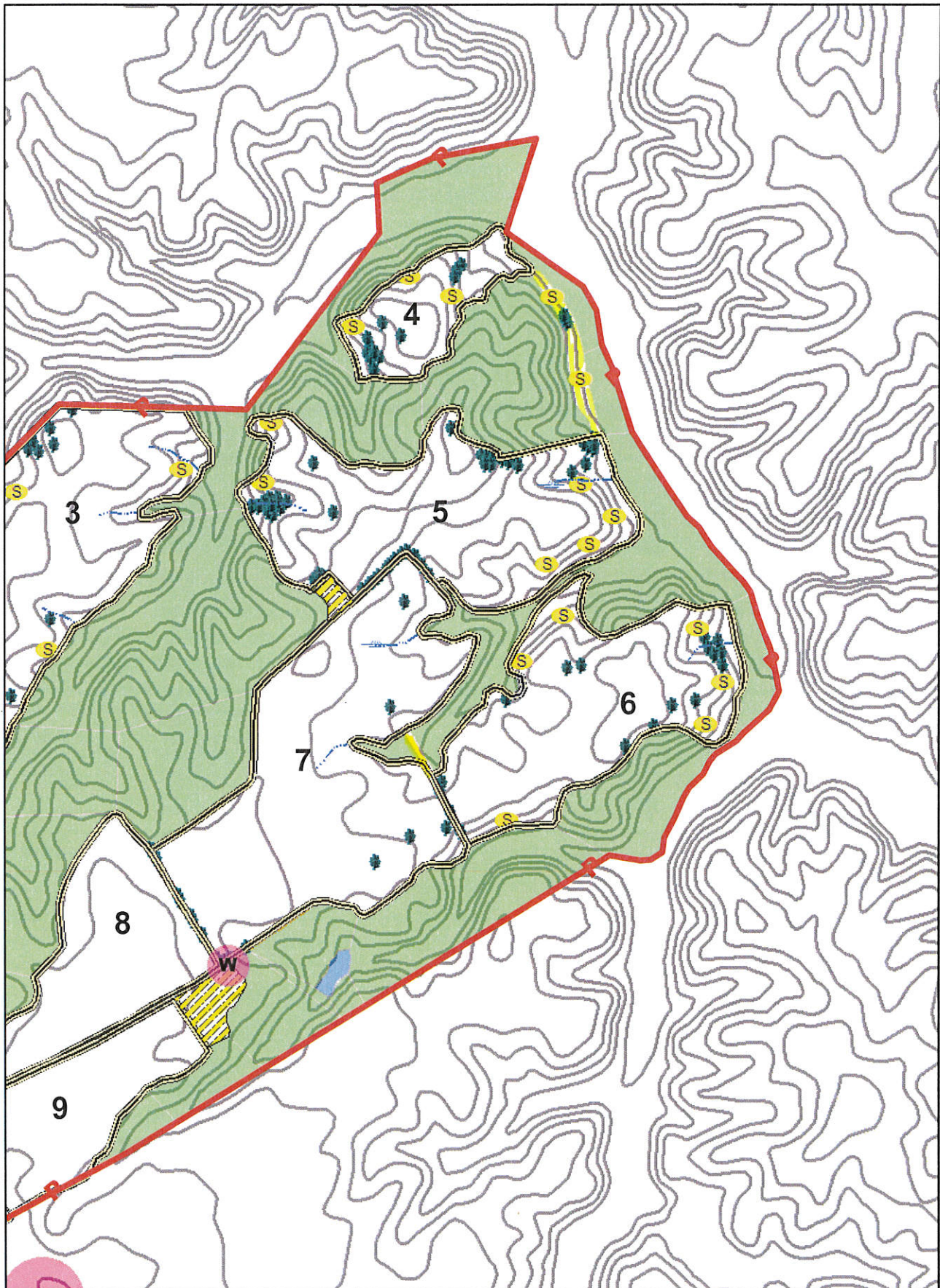
*Buffer can be reduced or waived upon written consent from landowner.



9-6-18

SITE PLAN

1 in = 660 feet

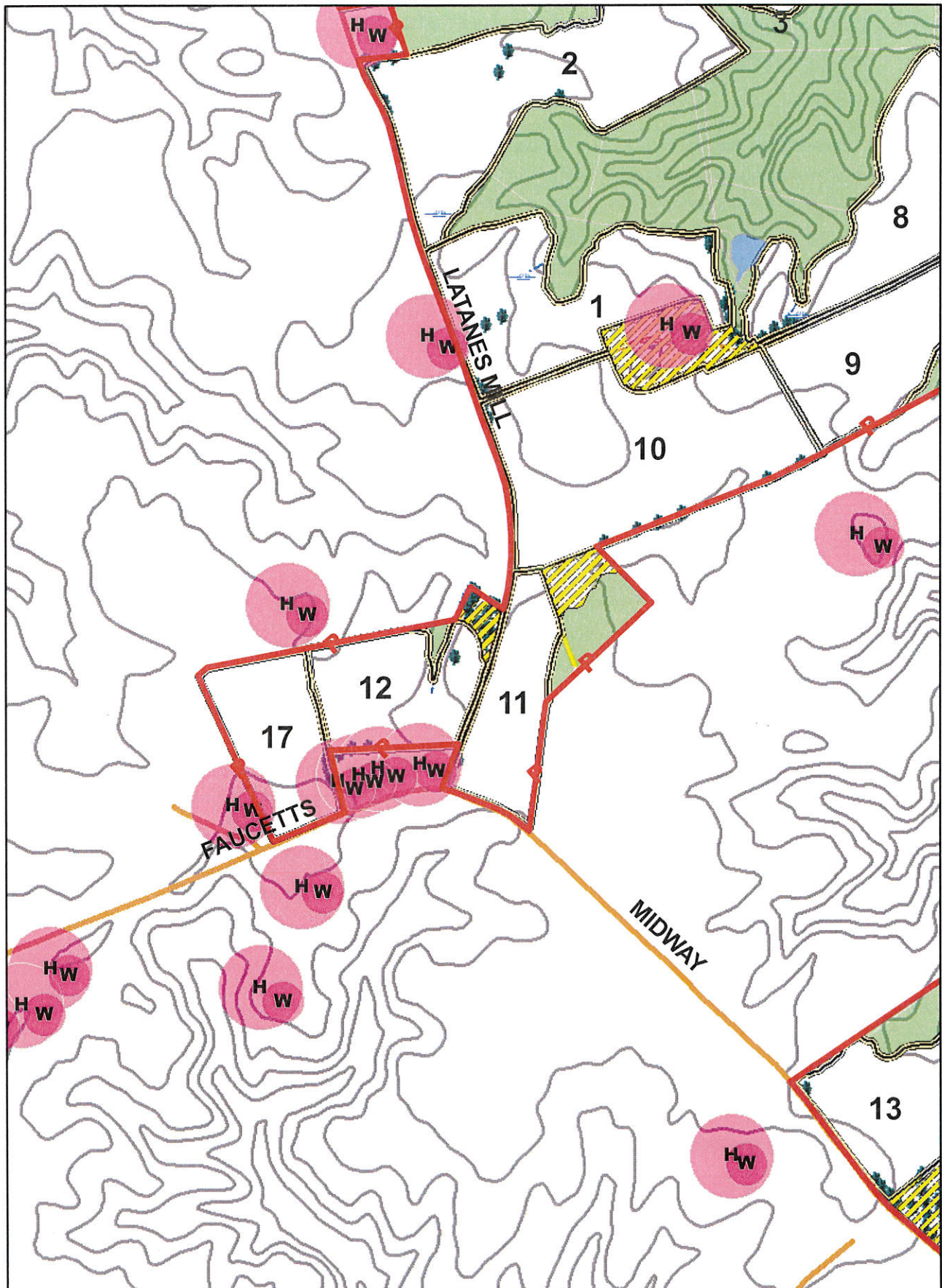


9-6-18

SITE PLAN

1 in = 660 feet

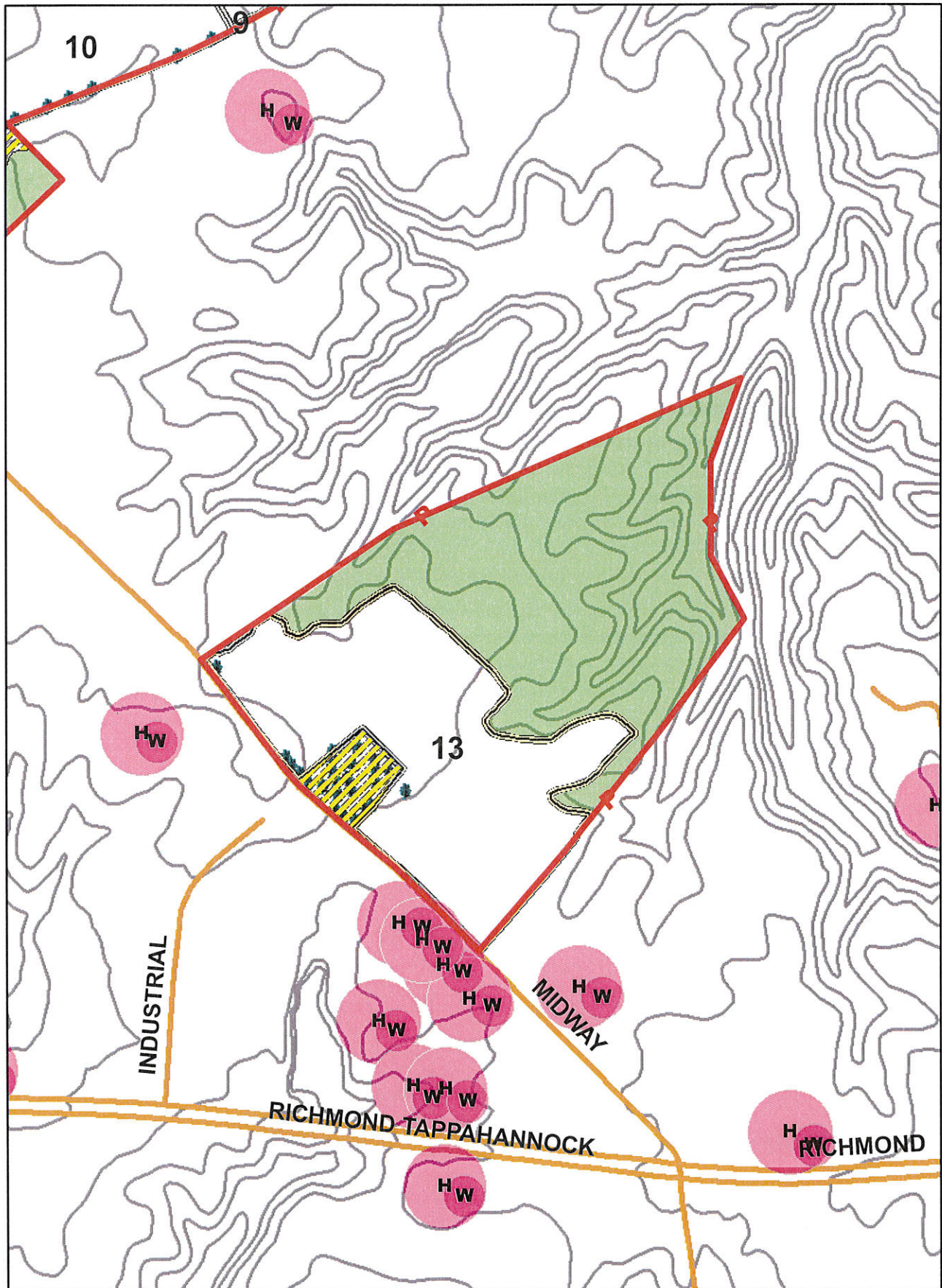




9-6-18

SITE PLAN

1 in = 660 feet

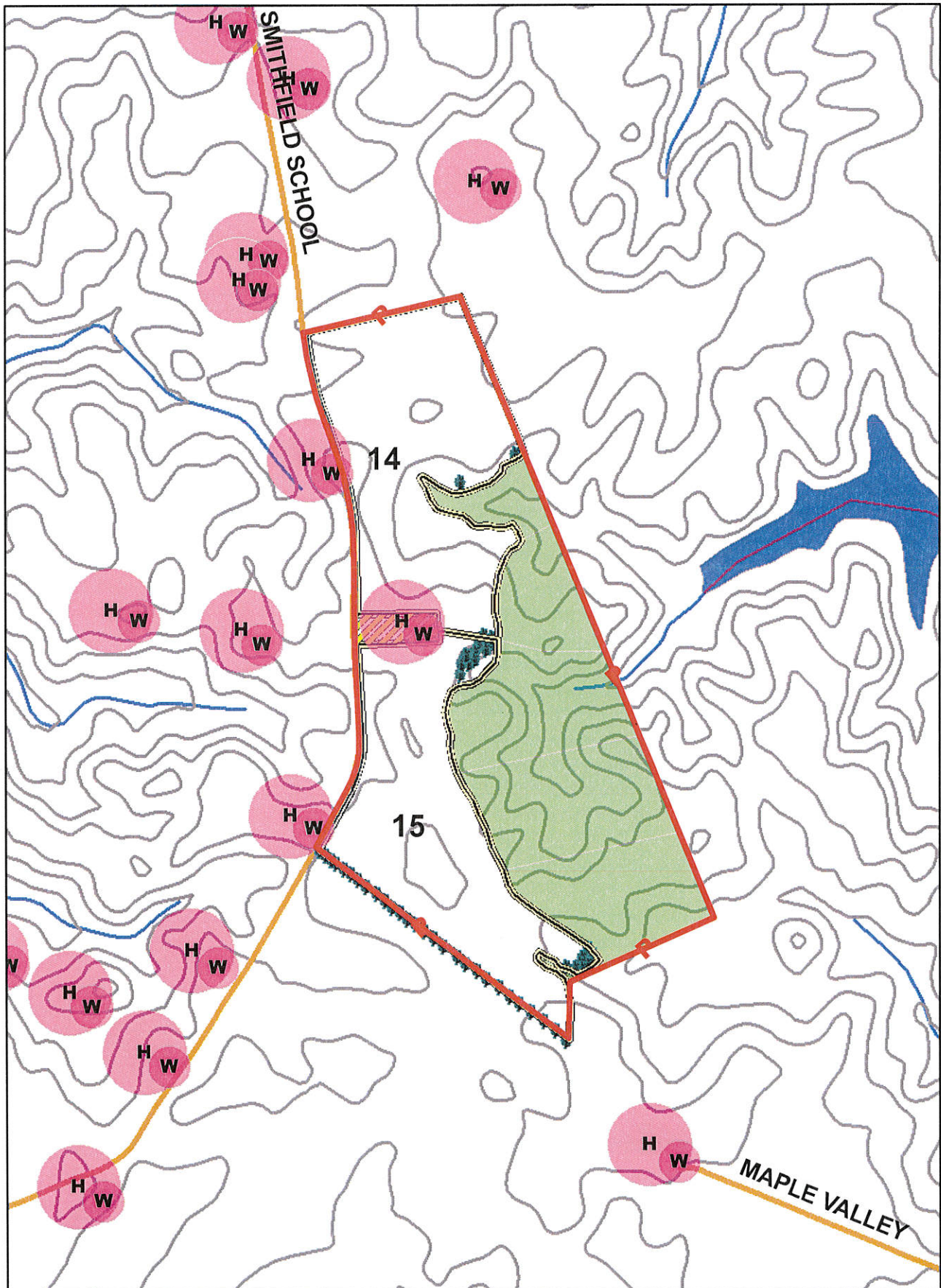


9-6-18

SITE PLAN

1 in = 660 feet

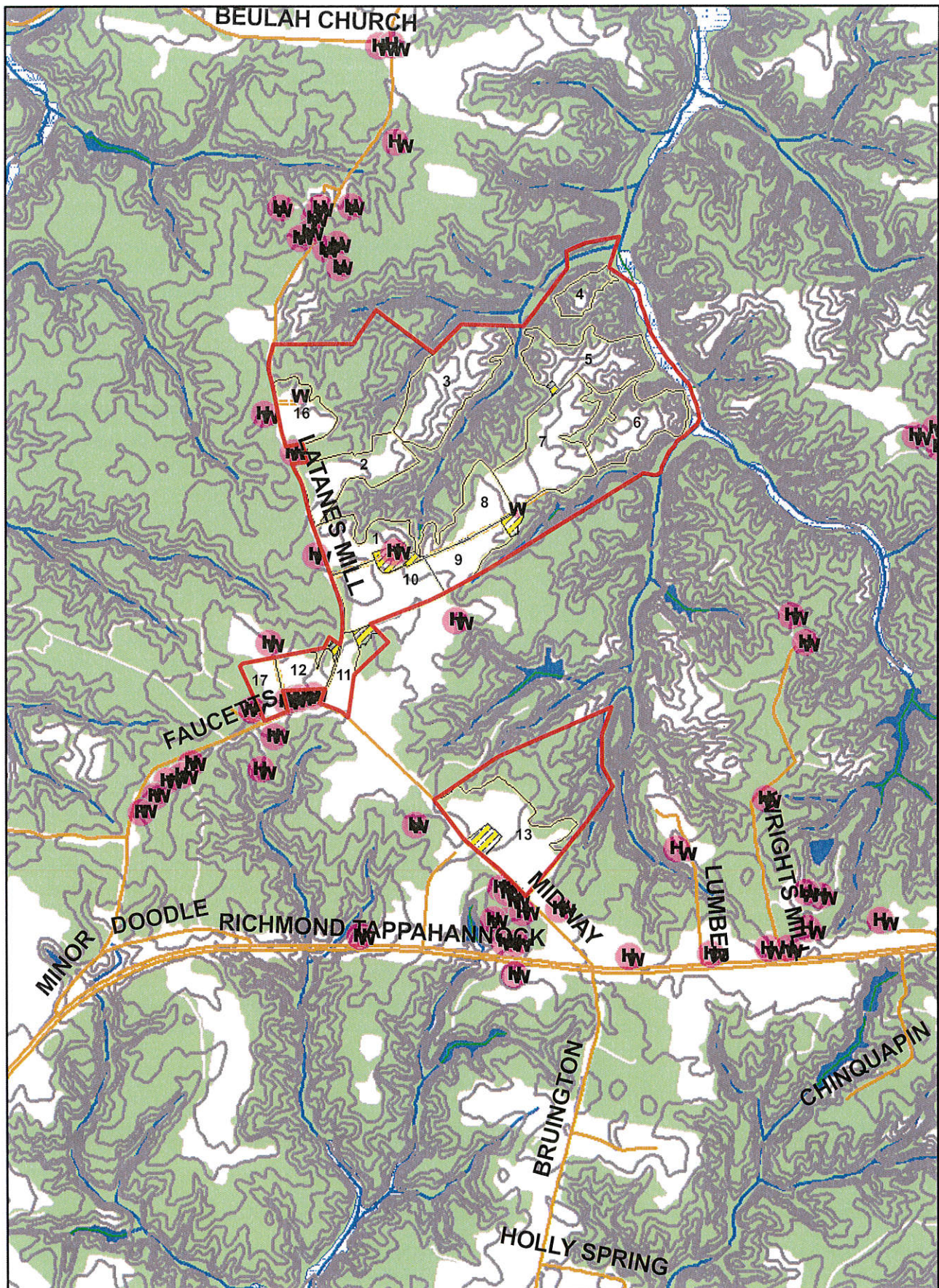




9-6-18

SITE PLAN

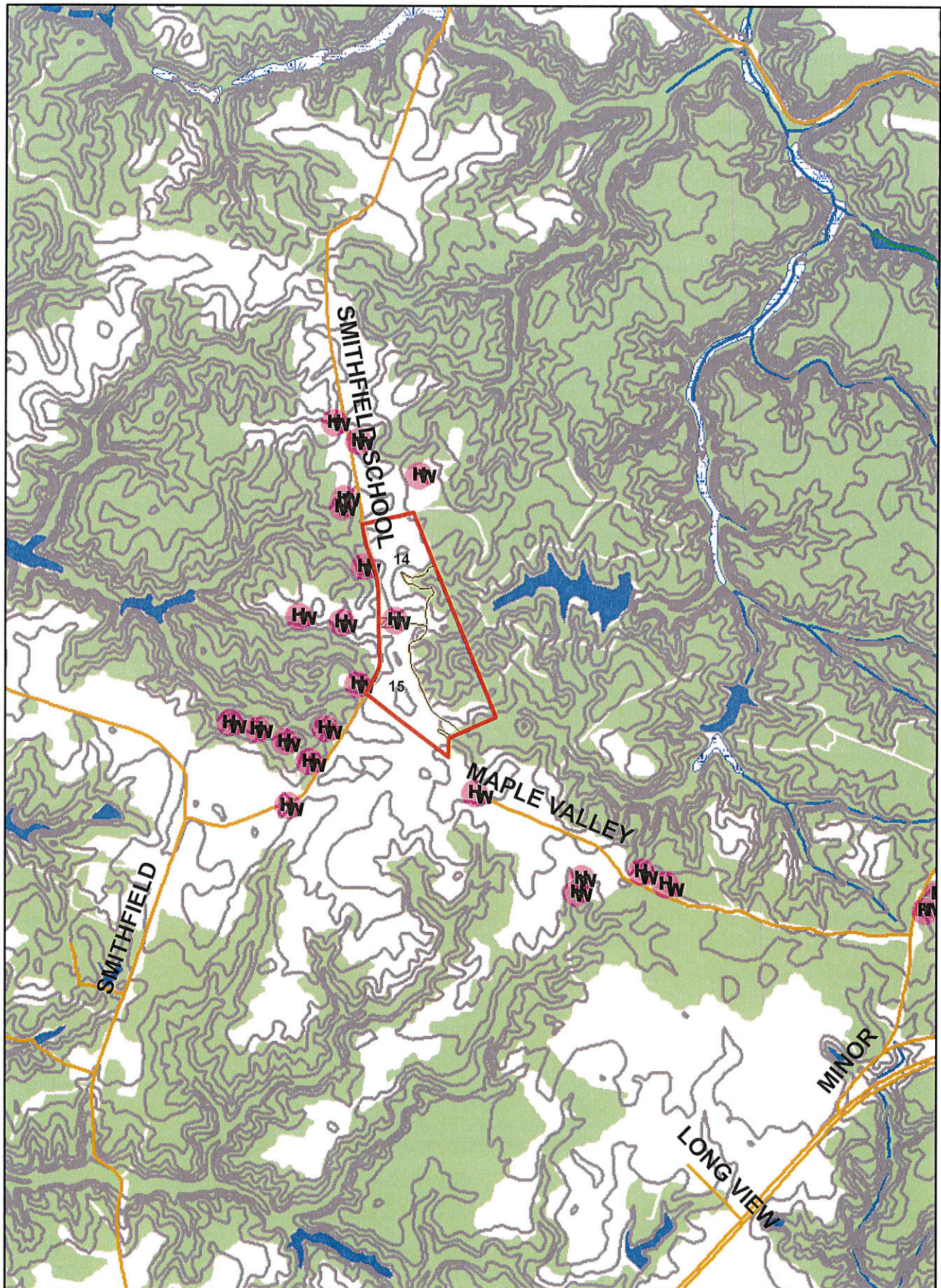
1 in = 660 feet



9-6-18

TOPOGRAPHIC MAP

1 in = 2,000 feet



9-6-18

TOPOGRAPHIC MAP

1 in = 2,000 feet